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COMMISSION

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August 12, 2008

INDUSTRY REVIEW DRAFT

REQUEST FOR PROPOSAL
511 Traffic Contractor
Letter of Invitation

Dear Contractor:

The Metropolitan Transportation Commission (MTC) plans to issue a Request for Proposal (RFP) in October 2008 to operate, maintain and further develop the 511 Traffic, Real-Time Transit and Phone Systems, which are part of the greater Bay Area 511 Traveler Information Program. The 511 traffic system collects, organizes and disseminates traffic speed, travel time and incident information in the Bay Area through 511 phone and the 511 website (511.org). The Real-Time Transit Information System was created by MTC, in cooperation with the Bay Area's transit agencies, to disseminate transit departure times through 511/511.org for all Bay Area transit operators that generate real-time predictions. The 511 phone and web systems are primary dissemination tools for multi-modal traveler information in the Bay Area. The selected firm will reliably operate and maintain the 511 Traffic, Real-Time Transit, and Phone systems; provide advice about system development or new approaches; focus on customer needs; further develop system components and functions; and provide emergency response services.

This letter, together with its attachments, comprises the Draft Request for Proposal (RFP) for Industry Review for this project. You may download a copy of the Draft RFP from MTC's website at http://www.mtc.ca.gov/jobs/.

MTC is soliciting industry feedback on the draft RFP prior to issuing the final RFP and has developed a list of questions for prospective proposers that are provided in *Appendix L*. Please send your responses electronically to Carol Kuester, Project Manager at ckuester@mtc.ca.gov.

Your decision to participate or not to participate in this industry review process will not impact (positively or negatively) MTC's consideration of any proposal you may submit in response to the final RFP.

MTC may contact potential bidders to discuss the responses, questions and comments they have provided in response to this industry review.

1. Scope of Work, Budget and Schedule

A preliminary scope of work is set out in *Appendix A,* which describes the required work tasks and deliverables under this Draft RFP.

MTC has budgeted approximately $28 million over five (5) years to pay for the work described in *Appendix A, Scope of Work*. The period of performance for the contract will be five (5) years anticipated to start on July 1, 2009 and ending June 30, 2014. MTC will have the sole option to extend the contract for up to five (5) additional years, in time periods of MTC's choosing. MTC also will have the option to remove specific tasks and their respective budgets from the contract based on Contractor performance or 511 operational needs.

If this procurement results in the selection of a Contractor who is not the incumbent, there will be a minimum six (6) month transition period, during which the incumbent Contractor as well as the Contractor selected under this RFP will work on the project.

2. Disadvantaged Business Enterprise Participation

Disadvantaged Business Enterprises (DBEs) and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other small businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.

Respondents are required to document their activities in the solicitation and selection of subconsultants on *Appendix J-3,* Proposer's List of Subcontractors (DBE and Non-DBE), Part I and II. For the complete DBE participation provisions applicable to this procurement see Section V.I and *Appendix J*.

3. Procurement Timetable

The approximate timetable for RFP development and Contractor selection is as follows:

Date	Procurement Milestone
September 3, 2008	Last date for comments from Industry Review
October 6, 2008	Final RFP issued
October 13, 2008	Proposers' conference
October 20, 2008	Last date for requests for exception and clarification
November 20, 2008 -4:00 PM	Closing date/time for receipt of proposals
January 20 & 21, 2009	Proposal discussions
January 28, 2009	Issue Best and Final Offer request (if necessary)
February 18, 2009	Best and Final Offers due (if necessary)
April 10, 2009	MTC Operations Committee approval
July 1, 2009	Start of new contract

4. General Conditions

MTC will not reimburse any individual or firm for costs related to preparing and submitting comments to this industry review draft RFP.

The selected proposer will be required to sign a contract with MTC, the provisions of which will be included in the final Request for Proposal. The resulting contract will be funded in part with federal funds. The resulting Contractor will be subject to a pre-award audit, in accordance with California Department of Transportation's Local Programs Procedures LPP 00-05.

Please do not submit proposals at this time. Information submitted to MTC in response to this industry review will be used to develop the final RFP, and will be kept confidential until the 511 Traffic contract is awarded.

Please confirm that you would like to receive email notification that the final RFP is available on the MTC website by emailing the Project Manager Carol Kuester at ckuester@mtc.ca.gov. In the email please indicate if you wish MTC to include the name of your firm on the list of interested bidders posted on the MTC website.

Thank you for your participation in this industry review process.

Very truly yours,

Ann Flemer

Ann Flemer
Deputy Executive Director

Attachments
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INDUSTRY REVIEW DRAFT

REQUEST FOR PROPOSAL

of the

METROPOLITAN TRANSPORTATION COMMISSION

for the

511 TRAFFIC CONTRACTOR

August 12, 2008

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, California 94607-4700

Table of Contents

I. PROJECT DESCRIPTION

A. PROJECT BACKGROUND

1. The Metropolitan Transportation Commission (MTC)

MTC is the regional transportation planning agency and the Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area, with statutory responsibilities for coordinating transit services in the region.

The San Francisco Bay Area includes the nine counties bordering the San Francisco Bay: Alameda and Contra Costa Counties in the East Bay; Marin, Napa, Solano and Sonoma Counties in the North Bay; San Francisco and San Mateo Counties on the Peninsula/West Bay; and Santa Clara County (the region's most populous county) in the South Bay. The region has a population of nearly 7 million (the fifth largest metropolitan area in the nation), supplies over 3 million jobs, and encompasses 7,179 square miles.

2. The San Francisco Bay Area 511 System

MTC manages the 511 Traveler Information Program to provide coordinated information about the public's travel choices and to fulfill the following mission, developed in the *511 Strategic Plan (April, 2006)*:

> "The 511 program must cost-effectively provide traveler information that customers both want and are prepared to act on, thereby enhancing the efficiency and maximizing the capacity of the Bay Area transportation system. This information should be accurate, reliable, multimodal, comprehensive and regional in scope. Responsibility for the gathering, processing and dissemination of 511 information should be regionally coordinated and rationally allocated to Bay Area transportation organizations — in both the public or private sectors — according to institutional interest, ability and wherewithal."

The 511 Traveler Information Program is a partnership between MTC, Caltrans, the California Highway Patrol, and many of the region's transit and paratransit operators. The program provides traffic, transit, rideshare and bicycling information to the public by telephone via the federally dedicated information phone number (511) and on a Website at 511.org. The information is organized by mode and provided by multiple contractors as described below. The selected Contractor will coordinate with the other MTC 511 Program Contractors to deliver the 511 Program and present it to the public as a single, comprehensive service.

a. Traffic

511 Traffic services are provided by the 511 Traffic Contractor and include traffic speeds, roadway incidents, construction activity and special events information. Key traffic dissemination features include 511 Driving Times^{SM}available on the phone and web, which are point-to-point freeway driving times on select Bay Area freeways;historical driving times (Predict-a-Trip^{SM}), available on the web and MY 511, which allows users to customize the traffic information they receive when accessing 511 on the phone or web.

b. Transit

511 Transit services are provided by both the 511 Transit Contractor (bd Systems) and the 511 Traffic Contractor. bd Systems collects, processes and disseminates transit schedule, route, fare and other information for all Bay Area transit operators on the transit.511.org website and also provides the 511 TakeTransit Trip Planner[SM] featured on the 511 website. The trip planner generates customized trip itineraries for travel on all major transit operators in the Bay Area.

The 511 Traffic Contractor, through its responsibility for providing the 511 phone system, provides pre-recorded transit information, including current transit incidents and also transfers callers to transit operator information centers. The Traffic Contractor is also responsible for collecting and disseminating real-time transit data.

c. Rideshare

The 511 Rideshare Contractor (PB Americas) provides the 511 Regional Rideshare services. Rideshare information on 511.org includes a carpool matching database, vanpooling information, park-and-ride lot locations, employer resources and available rideshare incentives. Callers to 511 are connected to the 511 Rideshare Contractor staff for personalized services. The selected 511 Traffic Contractor will be responsible for providing transfers to the rideshare program call center.

d. Bicycling

The bicycling.511.org website is a resource for bicycle information, including links to maps, use on transit, safety practices, local organizations and more. An interactive tool to map custom bicycle routes is under development. Callers to 511 are connected to the 511 Rideshare Contractor staff who provides personalized services for the bicycle program. The selected 511 Traffic Contractor will be responsible for providing transfers to the rideshare program call center. The 511 Rideshare Contractor and MTC staff support the bicycling website.

e. 511 Homepage

The 511 homepage is provided by MTC's 511 Marketing Contractor, Swirl. Swirl also provides comprehensive design guidance for all the web pages and helps facilitate their coordination. The 511 Traffic Contractor selected through this procurement will be responsible for providing and maintaining the 511 homepage servers and implementing design changes on traffic.511.org.

3. 511 Traffic & Real-Time Transit Program History

Originally called TravInfo™, the San Francisco Bay Area's program to provide traveler information, began development on June 1, 1993 after being selected by the U.S. Department of Transportation as a Field Operational Test (FOT). TravInfo™ became an officially deployed traveler information system on September 30, 1998. During the FOT, MTC managed over 10 contracts with private sector firms to provide the system. In 2000 MTC combined most of the contracts into a design-build-operate-maintain (DBOM) TravInfo™ contract, and selected PB

Farradyne (later Telvent) to help MTC develop the 511 traffic and phone system into its present design.

In December 2002, MTC launched the 511 phone number and the interactive voice response system as well as the 511.org web page and associated pages (traffic.511.org, transit.511.org, etc.) In March 2004, MTC added on-demand, point-to-point driving times (511 Driving Times℠). In July 2005 MTC launched a real-time transit information pilot on the 511 phone system, and in the same month, MTC awarded grants to assist eight transit agencies develop real-time transit services. MTC is now implementing a regional real-time transit information data clearinghouse to compile real-time predictions and disseminate them through 511, 511.org, and a network of signs at 21 transit hubs and the three regional airports.

4. Program Overview

This section explains how 511 Traffic Contract responsibilities are currently conducted. The new 511 Traffic Contractor will operate and maintain all existing assets, unless otherwise negotiated.

a. Traffic Data Collection and Processing

The 511 Traffic Contractor collects traffic data using three traffic data sources - Caltrans' loops, SpeedInfo doppler radar, and probe data. Custom 511 software, called the Caltrans Detector Data Interface (CDDI), connects to Caltrans' Advanced Traffic Management System (ATMS) to read the spot speed loop data collected by Caltrans as it is broadcast. The spot speed data from SpeedInfo is currently purchased under a contract between the 511 Traffic Contractor and SpeedInfo.

The probe data are collected through the TrafficWatch system, which reads Electronic Toll Collection (ETC) transponder tags on passing vehicles. The 511 Traffic Contractor is responsible for the deployment and maintenance of TrafficWatch equipment in the Caltrans right-of way per MTC's cooperative agreement with Caltrans. TrafficWatch calculates speed by noting when the same vehicle passes two identified points in the system.

The 511 system divides the Bay Area freeway system into links, and the 511 Automatic Link Data Fusion (ALDF) determines the optimal speed source for every link by calculating the speeds for each link every 60 seconds.

The 511 Traffic contractor processes data for use on the 511 phone and web and also provides traffic data feeds free of charge to Information Service Providers (ISPs) to encourage dissemination of traveler information as widely as possible. MTC is considering strategies for obtaining in-kind advertising or requiring credit for the 511 program for in exchange for use of these data feeds.

b. 511 Traveler Information Center

The 511 Traffic Contractor operates the 511 Traveler Information Center (TIC) located at Caltrans District 4 Headquarters in Oakland per a cooperative agreement between MTC and Caltrans. The TIC operates 24 hours a day, seven days a week to support the 511 phone and

web systems. TIC staff includes the 511 Operations Manager, 511 System Administrators, TIC Supervisors and TIC Operators. The TIC Operators are members of the Communications Workers of America (CWA).

TIC staff manually collect traffic and transit incident data. Data sources include the Caltrans Traffic Management Center (TMC), the California Highway Patrol Computer Aided Dispatch (CHP CAD), video cameras, the Caltrans CMS (Changeable Message Signs), Caltrans construction schedules, planned events (e.g. sporting events, concerts), calls from reliable sources (e.g. MTC project staff), and transit agency dispatch centers.

TIC staff enter data in the 511 Enhanced Data Fusion System (EDFS). Through the EDFS, TIC staff can view and analyze relevant traffic data, and external agencies can enter event information through an EDFS Internet connection. The EDFS interfaces with the data collection and data dissemination servers.

c. Data Dissemination

Traffic data are disseminated through the 511 phone system, over the internet at 511.org, via alerts to MY 511 users, to Information Service Providers through an XML data feed (TravInfo Open Messaging System (TOMS)), on freeway Changeable Message Signs (CMS), to the Caltrans District 4 Traffic Management Center and to the statewide freeway performance measurement system (PeMS). Real-time transit information is disseminated through 511.org and will also be disseminated through a transit data feed, on the 511 phone system and on multi-agency signs at transit hubs.

The 511 phone system is an Interactive Voice Response (IVR) system using a Nuance platform and Voice over Internet Protocol (VoIP). It provides information on traffic, public transportation, FasTrak, ridesharing, bicycling, TransLink, and other transportation resources. Phone users can provide comments by pressing 7-7 at any time, and the system includes a user survey feature.

The 511 Traffic page at 511.org disseminates traffic conditions and driving times (both live and historical) through map- and text-based tools. Personalized traffic information is provided on the MY511.org page. The 511.org home page serves as a portal to each of the modal sister pages (Traffic, Transit, Rideshare, Bicycling), while also providing promotional space for 511 and other MTC operational programs, and current traffic conditions via a live traffic map.

d. Hosting and Redundancy

The production servers that support the 511 phone and traffic website are located at a hosting facility in San Diego. CA. MTC selected a location outside the Bay Area to ensure continuity of 511 service in the event of a large-scale Bay Area emergency, as recommended by the 511 Strategic Plan (completed in April 2006). The hosting facility, AIS, also hosts the SANDAG 511 system.

Back-up servers are located at the Traveler Information Center in Oakland. The back-up equipment is currently designed only to provide a minimal level of information until full

functionality at AIS can be restored. We are now exploring options for providing a more robust, fully redundant back-up system that could provide full functionality. Implementation of a recommended alternative is not budgeted at this time and will depend on available funding among other factors.

e. Real-Time Transit

The incumbent 511 Traffic Contractor has built a database and data transfer protocols (XML) for real-time transit data. The system collects information about the next four predicted departure times within 90 minutes. Prediction data are updated once every minute. Transit agencies are responsible for procuring systems to generate real-time predictions. Agencies are added to the regional real-time system as their real-time programs are implemented. 511 will provide real-time transit departure information for all MUNI routes and BART by the end of 2008. Operators to be included in FY09-10 are AC Transit, Valley Transportation Authority, Water Transit Authority, WestCAT, and Emery Go Round.

f. Project Management

MTC's Project Manager for the 511 Traffic contract provides primary direction to the Contractor. MTC staff continuously monitors Contractor performance. MTC's ITS/511 Program Technical Advisor (Kimley-Horn and Associates) provides advice and services regarding software development processes, ongoing Intelligent Transportation System (ITS) system operations, ITS architecture, procurement assistance and other technical aspects of MTC's projects.

B. PROJECT GOALS

The following four goals provide the foundation of the project's Scope of Work (*Appendix A*). Proposers should be mindful of these goals when developing their approach to the work. It is MTC's intent that these goals will help proposers allocate and balance the project's resources.

1. Provide accurate and reliable traffic information.

MTC's primary contract goal is to provide accurate and reliable traffic information. The 511 Contractor is expected to operate and maintain the system to meet the data accuracy, phone and web availability, and voice response quality performance standards described in the Contract.

The Scope of Work reflects MTC's heightened priority for *operations and maintenance of the existing system* versus delivery of new system enhancements to ensure that 511 provides consistently accurate traffic and real-time transit information through consistently reliable web and phone service. Ongoing maintenance includes:

- Regularly scheduled preventive maintenance,
- Troubleshooting and fixing system failures,
- Responding to and recovering from hardware and software outages,
- Repairing and replacing equipment,
- Updating software,
- Backing up system data,
- Archiving backup media,

- Modifying the tools that collect and process 511 traffic information, and
- Optimizing system performance by making improvements or changes that take 50 or fewer hours of development time.

2. Maintain and increase 511 usage.

Achieving goal #2 will depend on providing accurate and reliable information (Goal #1), and the Contractor's ability to adapt to changing customer needs and changing technologies by:

- Conducting ongoing strategic planning to stay ahead of technological developments, mapping project needs to potential enhancements, and maintaining strategic and annual plans.
- Managing and addressing customer comments to identify how to optimize the existing system to improve the user experience, define system enhancements to meet customer needs, and how to perform maintenance without negatively impacting customers.
- Tracking and analyzing usage statistics to understand how environmental conditions, events, system features, changing technology, system problems, etc. affect usage and what this means for maintenance and project planning.
- Maintaining sufficient staffing capacity and capability to troubleshoot and fix system problems that most immediately impact the customer experience.
- Enhancing the system through task orders to ensure a thoughtful approach to system changes that considers how changes will impact the existing system and customer service.
- Providing an Application Programming Interface (API) to allow external parties to create specialty applications using 511 data. This will help 511 nimbly respond to the needs of niche markets.

3. Provide a cost-effective 511 service.

Decisions about enhancements must be made carefully, weighing potential customer benefits with long-term costs and impacts on the existing system. Again, strategic planning and a firm understanding of the customer base are critical.

The 511 Traffic Contract is expected to employ the most cost-effective strategies for collecting data without sacrificing data accuracy and reliability. The Contractor will annually assess whether the current data collection strategy provides the best quality data most cost-effectively compared to other data sources.

The 511 Traffic Contractor is also expected to annually assess strategies to reduce project costs, as well as strategies to add value to the contract. Value-added service could include adding services at no, or reduced, cost in exchange for advertising or data, advertising or data sales, subscription services, etc. The selected Contractor would implement approved strategies.

4. Respond to emergencies quickly and effectively.

MTC wants 511 to be the first place the public will go to for accurate, reliable transportation information in the event of an emergency. As such, the Scope of Work includes tasks to manage planned disruptions, prepare for emergencies respond to emergencies.

"Planned disruptions," are anticipated events such as major freeway construction. Preparing for a planned disruption may require a period of intense data collection and dissemination, and the implementation of special data collection and dissemination tools. Preparing for emergencies includes maintaining the system's emergency-response data collection and dissemination tools, developing additional tools, proactively addressing potential capacity issues, and training staff regularly. Existing emergency-response tools include an "Emergency Abbreviated System (EAS)" – a blog that replaces the current website and customizable abbreviated phone menus, a Content Management System (CMS) that allows the creation of "special incident web pages," and tickers or phone floodgate messages. Implementing these tools during an emergency and other actions that shall be taken are directed by Emergency Operations Procedures.

C. SUPPORTING DOCUMENTATION

MTC has made available the following detailed documents to help proposers understand the 511 Traffic, Real-Time Transit and Phone Systems. These materials are summarized below and available on the MTC website at http://www.mtc.ca.gov/jobs/. [Note: Not all documents available on website for Industry Review period.]

Overall Project Background

- *511 – Traveler Information: What's Behind the System?* April 2008
- *MTC Customer Service Programs General Public Phone Survey Results,* May 2008
- *511 Strategic Plan,* April 2006
- *SF Bay Area Regional ITS standards*

Project Management

- *Monthly progress report - sample*
- *Performance monitoring report-– sample*
- *Monthly phone calls and requests data – sample*
- *Weekly phone calls and request data - sample*
- *Screenshot of web tracking tool*
- *511 Usage Report - sample*
- *Sample System Availability Report*
- *511 Performance Monitoring Plan*

Project Equipment Inventory

- *Project Equipment Inventory - San Diego*
- *Project Equipment Inventory - Oakland*
- *TrafficWatch Equipment*
- *Commercial and MTC Software Inventory*

Traffic Data Collection and Processing

- *MTC's Cooperative Agreement with Caltrans to locate TrafficWatch equipment in the Caltrans right-of-way*
- *Design for Traffic Watch Software*
- *Design for Caltrans Data Detection Interface (CDDI) Software*

- *Data Collection System Maintenance and Operations Plan*
- *Design for Automatic Link Data Fusion (ALDF)*
- *Design for Link Data Interpolator (LDI)*
- *Caltrans/MTC Cooperative Agreement for Installation of TrafficWatch Equipment*
- *Design for Caltrans Reverse Data Feed*
- *Design for Smart Data Merge*
- *Design for CORBA-to-Framework Translator*
- *Enhanced Data Fusion System (EDFS) Concept of Operations*
- *Enhanced Data Fusion System Architecture*
- *Detailed Design for Enhanced Data Fusion System (EDFS)*
- *Detailed Design for Enhanced Data Fusion System (EDFS) - Addendum 1*
- *Enhanced Data Fusion System (EDFS) Configuration Management Plan*
- *Enhanced Data Fusion System (EDFS) Framework Data Dictionary*
- *Detailed Design for TravInfo Open Messaging Service (TOMS)*
- *Interface Specification for Caltrans Access to TravInfo Data Feed*
- *Information Service Provider Agreement*
- *Information Service Provider report - sample*

Traveler Information Center (TIC) Operations

- *TIC Standard Operating Procedures (SOPs)*
- *TIC Emergency Operating Procedures*
- *511 Operator Manual*
- *511 Manager User Guide*
- *TIC System Administrator Standard Operating Procedures (SOPs)*
- *MTC's Cooperative Agreement with Caltrans to maintain the current TIC at Caltrans District 4 headquarters*
- *TIC Supervisor Standard Operating Procedures*
- *TIC Staffing Plan*

Emergency Response

- *TIC Emergency Operating Procedures*
- *Design Addenda for the Emergency Abbreviated System*

Data Dissemination

- *Data Dissemination System Operations and Maintenance Plan*
- *511 Traffic Website Operations and Maintenance Plan*
- *Concept of Operations MY511*
- *Detailed Design Document for MY511*

511 Phone System

- *Nuance Voice Platform*
- *Call Flow Design and Dialog Design Specification*

Real-Time Transit

- *Regional Real-Time Transit Data Sharing and Storage Policy*
- *Detailed Design for Dynamic Transit Data Interface*

II. SCOPE OF WORK, PERIOD OF PERFORMANCE AND PAYMENT

A. FUNCTIONAL REQUIREMENTS

Functional requirements for the current system describing the level to which the system must be operated and maintained are provided in *Appendix A-2, Functional Requirements*. New functional requirements will be added as the project is enhanced.

B. SCOPE OF WORK

A preliminary Scope of Work for the project is detailed in *Appendix A, Scope of Work*. It is organized into six project elements.

I. Project Management
II. Data Collection and Processing
III. Emergency Response
IV. Renewable Services
V. Enhancements
VI. New Contractor Responsibilities

An overview of each project element and its tasks and subtasks is provided below.

*1. Project Management (*Appendix A.I*).*

This project element includes Project Planning, Project Administration, Project Management Tools, Project Coordination, Project Reports and Statistics, and Program Transitions.

Project Planning includes the development of a Five-Year Strategic Plan and Annual Work Plans. The selected Contractor will assess how new or different technologies, strategies and approaches can meet long-term project needs and goals in the Strategic Plan and will specifically define the new technologies, strategies and approaches that will be implemented in each contract year.

*2. Data Collection and Processing (*Appendix A.II*).*

This project element includes collecting and processing traffic data and operating the Traveler Information Center (TIC).

Data Collection and Processing is the essential task of gathering accurate and current data and processing it to meet the data accuracy standards defined in *Appendix A-3* and the functional requirements described in *Appendix A-2*.

The selected Contractor will operate and maintain the currently installed system components. The Contractor will maintain and optimize (i.e., improve) service through regularly scheduled preventive maintenance, troubleshooting and fixing system failures, responding to and recovering from hardware and software outages, repairing and replacing equipment, updating software, backing up system data, archiving backup media, and modifying the tools that collect and process 511 traffic information to ensure that the system components are performing optimally. The selected Contractor will provide the project's traffic data feeds and interfaces to

deliver information to the web, phone, Caltrans, and private sector Information Service Providers.

The selected Contractor will be expected to fulfill the TIC responsibilities described in the *TIC Standard Operating Procedures (SOPs)* and the *TIC Emergency Operating Procedures (EOPs)* provided on the MTC website at http://www.mtc.ca.gov/jobs/ until such time that the SOPs or EOPs are revised and approved by MTC. The *511 Operator Manual*, the *511 Manager User Guide*, *and* the *TIC System Administrator Standard Operating Procedures* are also provided on the MTC website.

*3. Emergency Response (*Appendix A.III*).*

This project element includes three aspects of emergency response: a) preparing for a *planned* major transit disruption or a major construction project and implementing strategies to manage the disruption; b) preparing for unplanned emergencies; and c) responding to an unplanned emergency (e.g., earthquake).

*4. Renewable Services (*Appendix A.IV*).*

MTC has the option to renew each of the following tasks on an annual basis with the Contractor, beginning in FY10-11.

- Operate and maintain traffic.511.org ;
- Operate and maintain the 511 phone service; and
- Collect and process real-time transit data and disseminate it on 511, 511.org, to a network of transit hub signs, and if applicable, to partner transit agencies.

MTC will provide reasonable notice of the decision to remove one or more of these task(s) from this contract. The Contractor budget will be reduced accordingly with the transition of any task(s). MTC's decision to renew or not renew the provision of these tasks with the selected Contractor will be based on:

- The skill set and level of expertise provided by the Contractor to accomplish the task,
- Synergies and coordination opportunities with other MTC contracts, and
- MTC's 511 goals and objectives.

While under the responsibility of the selected Contractor, the three renewable tasks all require the same comprehensive maintenance effort described above for collecting and processing traffic data. They require routine, preventive maintenance programs, system backup, data archiving, and equipment replacement. The tasks also require the Contractor to provide the staffing capability and capacity to troubleshoot and fix system failures, equipment, and hardware and software outages, as well as modify the system components to ensure optimal performance.

*5. Enhancements (*Appendix A.V*).*

Adding new features, enhancing existing features, enhancing existing data sources, adding new data sources, or changing the system's underlying technologies will be implemented following the execution of task orders between MTC and the Contractor. *Appendix A, Scope of Work* Project Element V, describes the steps the Contractor will take to define the implementation of

enhancements. Possible enhancements that might take place during the contract period are described in *Appendix C, Enhancements*.

Changing priorities and funding limitations may prevent certain tasks in *Appendix C* from being pursued during the contract period. In addition, enhancements associated with the website, the phone or real-time transit data collection could be done by another Contractor if MTC exercises its option(s) under Project Element IV to move provision of these services to another Contractor(s).

The task orders will specify the scope, schedule, budget and payment provisions for work to be performed (e.g., time and materials or deliverables). Once MTC and the Contractor agree to the terms of a task order, it will be executed by both parties and work will begin.

*6. New Contractor Responsibilities (*Appendix A.VI*).*

This project element includes tasks that may be assigned to this Contractor later in the contract period. Additional budget will be made available to add these tasks to this Contract and full scopes of work for these tasks would be developed at the time the tasks are added.

The following table summarizes how tasks will be executed.

Scope of Work Project Element	Executed Through		
	Initial Executed Contract	Task Order	Contract Amendment
I Project Management	√		
II Traffic Data Collection and Processing	√		
III Emergency Response	√		
IV Renewable Services	√		**√ (if not renewed)**
V Enhancements		√	
VI New Contractor Responsibilities			√

Appendix A, Scope of Work also includes the following four sub-appendices that are considered part of the Scope of Work:

Appendix A-1, System Components to be Maintained and Operated
This appendix lists the system components that the selected Contractor must operate and maintain until such time that they are retired or replaced.

Appendix A-2, Functional Requirements
This appendix lists the functional requirements of the current system. The selected Contractor shall operate and maintain the system to meet these functional requirements.

Appendix A-3, Performance Standards and Payment Deductions

This appendix explains the three performance standards that the Contractor must meet each month in order to receive full payment. Contractor's payment will be reduced when the performance standards as described in this Appendix are not met.

Appendix A-4, Project Deliverables and Approval Process
This appendix summarizes the project deliverables presented throughout *Appendix A, Scope of Work* and explains MTC's approval process for the acceptance of deliverables.

B. PERIOD OF PERFORMANCE AND PROJECT SCHEDULE

The initial period of performance for this contract will be five (5) years starting at contract execution, which is anticipated to be July 1, 2009, and ending on June 30, 2014. MTC has the sole option to extend the contract for up to five (5) additional years, in increments of MTC's choosing. The contract may be extended depending on MTC's satisfaction with the selected project team and overall changes to the 511 Program. MTC also has the option to terminate one or more of the tasks in *Appendix A, Scope of Work*, Project Element IV based on Contractor performance and other 511 operational needs.

If the procurement results in a change in Contractors, there will be a transition period of a minimum of six (6) months during which MTC's incumbent Contractor and the new Contractor will both work on the project. During this period, the new Contractor will be responsible for learning the system from the incumbent Contractor and taking over day-to-day operations and maintenance from the incumbent Contractor according the transition plan finalized by the selected Contractor. MTC wants to ensure a seamless, cost-effective project transition.

b. Year-One Project Schedule

Most of the tasks in *Appendix A, Scope of Work* are ongoing across the five-year project period. Key project schedule dates for the first contract year are listed below.

Task		Date Required
N/A	Contract execution	7/1/09
I.A.1	Five Year Strategic Plan FY10-FY14	8/31/09
I.A.1	Five Year Strategic Plan Update FY11-FY15	3/31/10
I.A.4	Annual strategy planning session	2/1/10
I.A.5	Annual Work Plan (FY09-10)	7/31/09
I.A.5	Annual Work Plan (FY10-11)	5/31/10
I.B.5	Local office space	9/30/09
I.F.1	Finalized transition plan	7/1/09
I.F.1	Transition complete	1/1/10
III.B.4	Mandatory TIC staff emergency operations training	9/30/09
I.A.6	Annual Work Plan Status spreadsheet (or other tool)	As defined in the selected proposal but not later than 6/30/10
I.B.3	Customer comment auto-response feature	
I.C.3	Customer comment management tool	
I.C.4	Configuration management diary tool	
II.A.5	LDI Analysis	
II.A.11	Traffic data QA/QC strategy	
II.B.4	Adjust the Smart Data Merge	
IV.A.5.a	Improve user ability to manipulate the traffic map	
IV.A.5.b	Reorganize the display of information on the website	
IV.A.8	Content Management Services	
IV.B.5.a	Improve the call flow "repeat" sequence	
IV.B.5.b	Improve scripts to aid caller navigation	
IV.B.5.c	Avoid repeating hints that a caller has already heard	
IV.B.5.d	Provide historical data on the phone	
IV.C.6	Real-Time Transit Data QA/QC strategy	
V.	Selected enhancements	

C. PAYMENT

1. Funding

A total of approximately $28 million is available for this contract for the five-year term as follows (in 1,000s of Nominal $).

FY09-10	FY10-11	FY11-12	FY12-13	FY 13-14	Total
$4.598	$6.515	$5.769	$5.593	$5.503	$27.978

In the past several years, contract expenditures have been approximately as follows:

Project management	10%
Data collection	25%
Data dissemination	30%
Real-time transit	15%
TIC Operations	20%

2. Compensation of Contractor

MTC will pay a fixed, average monthly lump sum for the performance of tasks in Project Elements I through IV, with the exception of emergency response task IIIC. Task IIIC will be paid based on a time and materials payment structure.

The fixed monthly lump sum payment will be an average based on the selected proposer's cost proposal. To allow for the potential non-renewal of Project Element IV tasks (renewable services), the monthly lump sum payment will be calculated as the sum of the following separately proposed lump sum payments:

- Traffic data collection and processing (Project Element II) & emergency response (Tasks III.A & B)
- Website services (Task IV.A)
- Phone services (Task IV.B), and
- Real-Time Transit data collection and processing (Task IV.C)

Tasks in Project Element V will be implemented following the execution of task orders between MTC and the Contractor. Task orders will specify the budgets and payment provisions for the work to be performed (e.g., time and materials or deliverables-based). Once MTC and the Contractor agree to the terms of a task order, it will be executed by both parties and work will begin.

The Contractor will perform all tasks and subtasks in Project Elements I through IV within the budget stated above, with the possible exception of Task III.C -- time spent responding to emergencies, which may be paid for with funding added to the contract following an emergency. If additional funds are not made available following an emergency, the funding to pay for Task III.C will come from the Project Element V budget.

After budgeting for Project Elements I through IV, the remaining funds will be dedicated to Project Element V. MTC does not have full funding for all Project Element V enhancements listed in *Appendix C*. MTC will prioritize and implement the most important and cost-effective tasks based upon the recommendations from the selected Contractor and ongoing strategic planning. In certain cases, MTC may seek additional funding to complete tasks in Project Element V.

Project Element VI tasks are not included in the project funding table above and are subject to the approval of MTC and future budgets. If approved, they will be incorporated into the contract through a contract amendment.

Tasks I.A.1 and I.B.4 require the selected Contractor to explore and implement approved strategies to add value to the contract, which could include generating project revenue. Any added value would be used to offset project costs or pursue new project investments.

The following table summarizes this discussion.

Scope of Work Project Element or Task	**Payment Method**	**Budget**	
		In Funded Contract	**Additional $ to be Identified**
I	Lump Sum	√	
II, IIIA & IIIB	Lump Sum	√	
IIIC	Time & Materials	**Possibly**	**Possibly**
IV	Lump Sum	√	
V	TBD	**Partially**	**Possibly**
VI	TBD		√

3. Contractor Performance Payment Deductions

MTC intends to link Contractor performance to payment by reducing the Contractor's payment amount as described in *Appendix A-3*, *Performance Standards and Payment Deductions*. The performance standards are summarized here.

1. **Phone and Web Availability** – The 511 phone and website must be available to the public at least 99.93% of the time (less than 30 minutes per month unavailable for the two systems combined).
2. **Data Accuracy** – Data disseminated on traffic.511.org, 511 phone, and freeway Changeable Message Signs shall be at least 98% accurate each month. MTC, through independent performance monitoring audits, will calculate data accuracy by comparing reported driving times and incidents to ground truth driving times and actual incident observations.
3. **Voice Response Quality** – The telephone system shall accurately recognize and respond to voice commands at least 70% of the time in any given month as measured by a phone-system- (Nuance) generated report provided to MTC by the selected Contractor.

4. In addition, MTC will identify and negotiate Contractor performance milestones for the completion of select task orders, or select tasks within task orders, at the time the task orders are written. MTC intends to reduce the Contractor's payment amount when achievement of a performance milestone is delinquent.

III. FORM OF PROPOSAL

Proposers must submit an original and seven (7) hard copies, one electronic PDF version and one electronic Word version (plus Excel for the cost proposal) of their proposals by Friday, November 21, 2008, at 4:00 PM (Pacific Time) to be considered. Proposals shall be submitted to:

Carol Kuester
Project Manager
Metropolitan Transportation Commission
Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700

In furtherance of MTC's resource conservation policy, proposers are asked to print proposals back to back and are encouraged to use recycled paper for all proposals and reports.

Proposal content and completeness are most important. Proposals must be typed with a minimum 12-point font. Text should be written on 8 ½" by 11" paper, although graphics and spreadsheets may be provided on paper up to 11" x 17". Proposals shall not exceed 150 pages, excluding proposal covers, section dividers, letter of transmittal, title page, table of contents, change-bar Scope of Work, resumes, and forms required in Appendices H – I-3.

Each proposal should include:

A. LETTER OF TRANSMITTAL

The transmittal letter should be signed by an official authorized to solicit business and enter into contracts for the firm and include the name and telephone number of a contact person, if different from the signatory. It should also include a statement that the proposal (or Best and Final Offer (BAFO), if applicable) is a binding offer to contract with MTC according to the requirements of this RFP for a period of one hundred fifty (150) days from the due date for submission of proposals (and/or BAFO's).

B. TITLE PAGE

The title page should include the RFP subject, the name of the proposer's firm, address, telephone number, name of contact person, and the date.

C. TABLE OF CONTENTS

The table of contents should provide a clear identification of the material by section and page number.

D. INTRODUCTION

Provide a general description of your knowledge of the Bay Area's existing 511 traffic, real-time transit and phone system and its hardware and software; your understanding of the goals of the

program and their relationship to the Scope of Work; and what you see as the biggest challenges for the program during the next five years.

E. FIRM DESCRIPTION, TEAM STRUCTURE, ORGANIZATION AND KEY PERSONNEL

Describe the firms on the team (including the prime Contractor and subcontractors), including location of offices and headquarters, number of employees, number of years in business, number of years the firm has been profitable, and areas of business. Describe the roles of the subcontractors, their specific responsibilities and how their work will be supervised and coordinated. Describe where the prime Contractor and subcontractors have worked together before.

Identify key staff proposed to work on the project and identify the project tasks for which each key staff member will be responsible. Identify which staff will be local and which will be based outside the San Francisco Bay Area. Indicate their time commitment to this contract for the base period of performance. Also, summarize their other known project commitments and discuss how you will ensure that each task lead will have sufficient time to dedicate to this effort.

Provide a project staffing organization chart showing the key staff members, their lines of accountability, and how communication will flow within the team and to MTC. The Contractor may not change the proposed key staff or location(s) without written approval from MTC.

Specifically address:

- How locally and non-locally based project team members will understand the full breadth of the project and how their work impacts the performance of other tasks being carried out by other team members;
- How you will ensure that team member commitments to other projects will not impact project performance;
- How you will ensure the required presence at the hosting facility located in San Diego per functional requirements 5.6, 6.22, 16.5 and 53.5 in *Appendix A-2*;
- How you will staff and manage the TIC including recruitment, training and retention strategies at a unionized shop;
- How you will provide the staffing capacity and capabilities to readily address problems that most immediately impact the customer experience and maintain the existing system even when new development may be occurring;
- How you will provide the wide range of skills required for this project, including new technology development and management, website design, telephony expertise, large-scale project management, and day-to-day operations oversight; and
- How you will anticipate and manage the impacts of changes to the project on existing operations, both during the development process and after the development has been fully integrated.

F. QUALIFICATIONS AND REFERENCES

Describe your team's qualifications and the qualifications of key personnel (including subcontractors' personnel) as they relate to the tasks required by *Appendix A, Scope of Work*. Provide sufficient detail to confirm that your team has the necessary qualifications to provide all the required services, paying particular attention to the following abilities:

- Project management,
- Strategic planning,
- Customer care,
- Field traffic data collection,
- Data integration and data processing,
- Provision of 24/7 operational and technical support to MTC,
- Guaranteed maintenance response times per functional requirements 22.1 – 3 and 53.1 - 3,
- Website hosting, networking and design expertise needed to keep the website functioning optimally and cost-effectively,
- Development of website and other applications using 511 data,
- Telephony expertise needed to keep the 511 phone system functioning optimally and cost-effectively,
- Operations center management, and
- Development and adherence to scope, schedule and budget.

For the proposed project manager and task leads, describe the breadth of technical and project management knowledge and skills and how they relate to this project.

Provide a maximum two-page resume for each key team member (including any subcontractor with a proposed annual budget exceeding $100,000). Resumes may be provided as an appendix to the proposal and will not count toward the page-count limit.

Provide at least three references from previous projects similar to this project, or elements of this project, on which the firm and key project staff worked. Include a brief project description, the project title, duration, budget, sponsoring agency, sponsor project manager, and roles played by individuals proposed for this contract. Include the name of the agency for which the work was performed, contact person name, telephone number, and year(s) that the work was done. Provide references who can comment on the team's ability to assume responsibility to operate and maintain existing technically complex operations, website development, management and design expertise, one reference who can comment on the team's telephony expertise, one who can comment on the team's software development, integration and troubleshooting capabilities, and one who can comment on the team's overall project management and strategic planning abilities. At least one of the references should be from a public sector agency.

At least one reference is required for each subcontractor with a proposed budget over $100,000 for this contract.

Provide a summary of all contracts that members of your team (including subcontractors) have held with MTC in the past three years, including a brief description of the scope of work, the contract amount, and date of execution.

G. WORK PLAN

Explain how the tasks and subtasks in *Appendix A, Scope of Work* will be accomplished and your overall approach to managing the work. Proposers may refine or modify the tasks and subtasks identified in *Appendix A* as long as the proposers' work plan addresses the project goals described in I.B Project Goals and can meet the functional requirements and performance standards described in *Appendix A-2, Functional Requirements* and *Appendix A-3, Performance Requirements and Payment Deductions*. Any refinements or modifications should include associated deliverables and the rationale for such refinements or modifications should be explained.

Specifically address the following aspects of the Scope of Work tasks in your proposed work plan:

1. Project Management

a. Project Planning

In anticipation of the development of a five-year Strategic Plan in Task I.A.1, discuss:

- Data Collection Strategy

Describe your team's professional opinion about the future of data collection. Discuss your vision of how MTC's current mix of data collection methods could change during the course of this contract period and why. Explain the pros, cons and implications of these possible changes (e.g., control, quality, ability to provide data to others, capital cost versus recurring cost, flexibility, etc.) and how they could be accommodated. Discuss the reasons for, and implications of, not making changes during the course of the contract period.

- Cost Reduction

Discuss strategies or approaches to reduce project costs and/or make the project more cost-effective, e.g., changing, scaling down, streamlining, optimizing or eliminating certain features or functions; changing the approach to certain tasks; or altering or eliminating tasks within the Scope of Work. Describe how these strategies or approaches would impact MTC's program goals. Describe the trade-offs associated with the cost-cutting strategies, the magnitude of costs that could be saved, and your level of confidence that the strategies would be effective.

- Value-Added Services

Recommend specific strategies for implementation and/or further exploration and propose how partnerships, relationships, or incoming revenue would be managed. Discuss your experience with, and knowledge of, strategies to add value to what 511 can provide without increasing the project budget. Strategies could include partnerships, service exchanges, or generating revenue from advertising or data sales. Discuss the pros and cons of the strategies and the estimated financial worth of different strategies, including gross and net revenues if applicable.

- Optimizations to the Existing System

Optimizations are system adjustments, improvements or changes that will take less than 50 hours of work that are done through ongoing project maintenance. Describe your ideas for optimizing the website and/or phone functions, traffic data collection and processing, and real-time transit data collection and processing. Explain how you would prioritize your recommended optimizations.

- System Enhancements

Provide any ideas you have for enhancements not included in *Appendix C, Enhancements*. Include your ideas for additional types of data to be provided through 511 (e.g., parking data) and the features that would need to be developed to disseminate the new data types.

- System Replacement Plan (See *Appendix B)*

MTC has provided a preliminary System Replacement Plan in *Appendix B, System Replacement Needs*. Comment on this plan based on your understanding of replacement needs in general and ideas you have proposed specifically related to data collection, optimizations and enhancements. Finally, explain whether you would maintain MTC's existing custom 511 software or propose to change to different systems. Explain your timeline, rationale, and implications for ongoing system operations and maintenance. If you are proposing different software for 511, discuss the proprietary restrictions on the product and the Contractor's ability to comply with MTC's requirements outlined in Section J.2 of this RFP.

- Technology and Industry Trends

Explain how you will stay informed of industry trends and how you will provide guidance to MTC about changing technology and keeping 511 current and relevant. Demonstrate your command of the technology opportunities or limitations associated with this project by describing your vision for how traveler information programs will change in the next ten years. Discuss the implications of your long-term vision on this project.

- Schedule

Discuss your estimated timeline for implementing any discussed or recommended strategies. Discuss the anticipated duration of planning for and implementing data collection, cost reduction, and value added strategies; optimizations; enhancements; and system replacement efforts.

b. Project Administration

- Customer Care Services

Explain your approach to managing 511 customer comments. Discuss your strategy for categorizing and using comments as a planning resource. Explain the staff resources you will dedicate to responding to comments, thresholds for response-worthy comments, and policies for timely response.

- Managing Value-Added Services

Based on your recommended strategy for adding value to the contract, discuss your approach to implementing the strategy and implications for project management and budgeting.

c. Project Management Tools

Describe the tool(s) you propose for tracking and managing customer comments, how you would provide a "configuration management diary," and how this tool would be used.

d. Reporting and Statistics

Discuss your understanding of MTC's reporting needs and the importance of having data and statistics available to support project understanding and strategy development. Based on the sample reports available at http://www.mtc.ca.gov/jobs/, discuss any ideas to improve the report content or formats.

e. Transition

MTC has provided a preliminary transition plan in *Appendix D, Preliminary Transition Plan*. Proposers who are not the incumbent Contractor should comment on this plan based on your understanding of transition needs. Describe your approach to transition, including additional detail to the preliminary plan or alternative organization, if applicable. Discuss staff development, office logistics and timeline or phasing of assuming full responsibility for different functions.

2. Data Collection and Processing

Discuss the most important aspects of operating and maintaining the 511 Traffic data collection and data processing systems. If you are recommending use of a new technology for data collection, discuss your approach to implementing this change and implications of the use of a new technology on ongoing operations and maintenance. Discuss how you will monitor the system 24/7. Discuss your approach to troubleshooting and fixing problems and how you will set priorities for individual maintenance items. Discuss your approach to configuration management. Discuss any privacy restrictions on use, or other public policy issues that a new technology may present. Discuss your approach to providing data to Information Service Providers, including the merits of proactively marketing the 511 data feed and strategies to understand 511 usage as a result of the data feed.

Discuss how you will manage life cycle replacement of data collection and processing equipment and whether you plan to maintain MTC's custom 511 software or propose converting to different software tools. Explain your rationale for your strategy, the budget and maintenance implications, and how your strategy meets the contract goals.

Describe your approach to managing and operating the TIC. Explain how TIC Operations will be integrated into other Contractor functions. Discuss your understanding of the TIC SOPs (provided at http://www.mtc.ca.gov/jobs/) and how you will ensure they are followed and improved upon. Discuss your approach to recruitment and retention of TIC staff. Discuss any ideas you have for changing TIC operations. Discuss how you will ensure operations are not negatively impacted when new enhancements are implemented.

3. Emergency Response

Describe your approach to meeting MTC's expectations for preparing for, and responding to, emergencies. Discuss your understanding of the emergency response functional requirements and how you would meet them. Discuss how you will staff the emergency response effort. Discuss your understanding the TIC Emergency Operating Procedures (EOP) (available at http://www.mtc.ca.gov/jobs/) and how you will ensure they are following and improved upon. Discuss options for developing web-based capability for entering incident information to ensure that TIC functions could be performed remotely in emergencies.

4. Renewable Services

Discuss the important aspects of managing the existing website and your approach to providing optimal performance and customer service. Discuss your approach to implementing website optimizations and enhancements and how you will ensure seamless website delivery. Discuss how and when your team will update the traffic page and your strategy for ensuring a customer-focused, user-friendly, and interesting website.

Discuss the important aspects of managing the existing phone service and your approach to providing optimal performance and customer service. Discuss your approach to implementing optimizations and enhancements for the 511 phone service and how you will ensure seamless delivery of phone services. Discuss your approach to streamlining phone service to better use system capacity.

Discuss the important aspects of operating and maintaining the real-time transit data collection and data processing systems. Discuss how you will monitor the system 24/7. Discuss your approach to troubleshooting and fixing problems.

For the website, the phone system and real-time transit, discuss how you will manage life cycle hardware and software replacements for each and whether you plan to maintain MTC's custom 511 software or propose converting to different software tools. Explain your rationale for your strategy, the budget and maintenance implications, and how your strategy meets the contract goals.

5. Enhancements

Based on your team's vision for 511, explain your approach to setting priorities and budgeting for the tasks identified in *Appendix C, Enhancements*, keeping in mind MTC's goals.

Explain your proposed approach to:

- Upgrading or replacing the Enhanced Data Fusion System (EDFS) to make it a web-based application, simplify data entry, and provide additional functionality, and
- Designing and implementing new dissemination methods (e.g., PDAs, cell phones, etc.).

H. PROPOSED REVISIONS TO SCOPE OF WORK

Based on your team's proposed work plan, provide a change-bar version of the Scope of Work provided in *Appendix A* that identifies where your proposed approach alters the preliminary Scope of Work. The Scope of Work is available as a Word document on MTC's website at http://www.mtc.ca.gov/jobs/. The change-bar version of the Scope of Work may be provided as an appendix to the proposal and will not count toward the page-count limit.

I. PROJECT SCHEDULE

Propose a project schedule that, at a minimum, shows the duration and dates of how tasks will be performed in the first year and, at a minimum, includes the tasks listed in Section II.B, Period of Performance and Project Schedule. In addition, based on your proposed work plan, provide a five-year project timeline showing the duration and start quarter(s) when you would implement any proposed system changes as well as the enhancements described in *Appendix C.*

J. COST PROPOSAL

Provide the cost proposals listed below. Budgets should reflect any anticipated cost increases (e.g., due to salary increases, cost of living, etc.) through FY12-14. The selected Contractor will be held to its proposed budgets and rate structure for the course of the project period. The proposed budgets and rate structure shall become part of the resulting contract.

If applicable, provide revenue generation estimates based on your proposed value-added strategies and apply them as cost savings, as instructed on the budget forms.

1. Project Budget by Year

Section II.C, Funding, described the annual and total funding available for this project over the contract period. Proposers may propose annual budgets that are different from what is shown in Section II.C, as long as the sum of the cumulative annual budgets do not exceed the sum of cumulative funding available up to that year. *Appendix E*, *Format for Presentation of Project Budget by Year* provides a sample format showing how the Project Budget by Year should be presented. This form is also available electronically in Excel format at http://www.mtc.ca.gov/jobs/.

2. Hourly Rates

Complete *Appendix F*, *Rate Sheet* to identify the proposed hourly rates for each staff member. The hourly rates should be broken out by description of costs to include, at a minimum, salary, overhead and profit for each year of the contract term. These rates will be subject to audit. Once accepted, billed rates must not exceed accepted rates. This form is also available electronically in Excel format at http://www.mtc.ca.gov/jobs/.

3. Detailed Task/Subtask Budget

Complete *Appendix G*, *Format for Presentation of Project Budget by Task* per the instructions and guidelines provided in *Appendix G.* This form is available electronically in Excel format at http://www.mtc.ca.gov/job/. Include *all* costs associated with performance of Project Elements I

through IV in the budget. MTC reserves the right to negotiate each budget in Project Elements I through IV.

Remaining budget should be applied to Project Element V and should reflect the Contractor's proposed work plan. It should include the budget needed to implement enhancements proposed for each year as well as the budget needed to prepare functional requirements, scopes of work and task orders for each enhancement. The scoping, design, implementation and/or integration of any one enhancement can span more than one fiscal year.

4. Contractor Performance Payment Deductions

Appendix A-3, Performance Standards and Payment Deductions explains how MTC will reduce Contractor payment if performance standards are not met. If desired, propose alternative or additional strategies for linking Contractor performance to payment and explain why these are a better or more desirable means of achieving MTC's goals. If MTC chooses to adopt an alternative or additional strategy, it will be included in a Request for Best and Final Offer (BAFO).

K. CALIFORNIA LEVINE ACT STATEMENT

Submit a signed Levine Act statement (*Appendix H).*

L. LOBBYING AND DEBARMENT CERTIFICATE

Submit completed Lobbying and Debarment certificates (*Appendix J-1 & J-2*).

M. SUBCONTRACTOR INFORMATION FORM

Submit a completed *Appendix J-3, Bidders List of Subcontractors (DBE and Non-DBE), Part I and II.*

IV. PROPOSAL EVALUATION

A. REVIEW FOR GENERAL RESPONSIVENESS

MTC staff, in consultation with the MTC Office of General Counsel, will conduct an initial review of the proposals for general responsiveness. Any proposal that does not include enough information to permit the evaluators to rate the proposal in any one of the evaluation factors listed below will be considered non-responsive. A proposal that fails to include one or more items requested in Section III, Form of Proposal, may be considered complete and generally responsive, if evaluation in every criterion is possible.

MTC reserves the right to accept or reject any or all proposals submitted, waive minor irregularities in proposals, request additional information or revisions to offers, and to negotiate with any or all proposers.

B. EVALUATION FACTORS

Responsive proposals will then be evaluated by a panel of MTC and other public agency staff. Proposals will be evaluated on the basis of the following four evaluation factors, listed in descending order of relative importance. Listed under each evaluation factor are aspects of the proposals that the panel will consider in its evaluation. These will not be weighted or evaluated independently.

1. Work Plan

- Thoroughness, appropriateness, clarity, logic, and risk of proposer's approach related to:
  - The five-year work plan
  - Adding value to the contract
  - Staying up-to-date with consumer technology, traffic data collection methods, and industry trends
  - Data collection
  - Operating and maintaining the system
  - Managing and responding to customer feed back; using customer input for project planning
  - Preparing for and responding to emergencies
  - Managing the project
- Logic, risk and appropriateness of proposed schedule

2. Team Qualifications and Coordination

- Qualifications and experience of team and key project staff in projects similar to the Scope of Work of this RFP and covering the required skill sets
- References for team and key project staff for projects of similar size and scope and with public agencies
- Availability of team members

- Approach to managing maintenance and development without disrupting the production environment

3. Resource Availability and Allocation

- Assignment of key personnel among project elements, tasks, and subtasks
- Availability of key personnel to support this project
- Appropriateness of labor hour distribution
- Appropriateness of fully-loaded rates including the component parts (e.g., labor, overhead and profit)
- Appropriateness of allocation of non-labor resources
- Cost effectiveness

4. Communications

- Clarity, structure, and readability of the proposal
- Ability to speak and present clearly (as demonstrated in discussions)

Following the initial evaluation, the panel may elect to recommend award to a particular proposer, with or without interviews, or may enter into discussions with a "short list" of proposers, consisting of those proposers reasonably likely, in the opinion of the panel, to be awarded the contract.

C. PROPOSER DISCUSSIONS

The purpose of discussions with each proposer on the "short-list" will be to identify specific deficiencies and weaknesses in its proposal and to provide the proposer with the opportunity to consider possible approaches to alleviating or eliminating them. These deficiencies or weaknesses may include such things as technical issues, management approach, cost, or team composition. Discussions may take place through written correspondence and/or face-to-face meetings. The Project Manager, as well as other key personnel identified by the evaluation panel, will participate in any discussions.

MTC reserves the right to not convene discussions and to make an award on the basis of initial proposals, with or without discussions.

D. REQUEST FOR BEST AND FINAL OFFERS (BAFO)

Following the discussions, MTC will give the proposers with whom discussions were held the opportunity to revise their written proposals to address the concerns raised during discussions through issuance of a Request for BAFO. Following receipt of the BAFO's, the evaluation panel will re-evaluate the proposals, as revised, against the evaluation criteria. The evaluation panel will then recommend a BAFO to the Executive Director. If approved by the Executive Director, the recommendation will be presented to the Commission for approval.

V. GENERAL CONDITIONS

A. LIMITATIONS

This RFP does not commit MTC to award a contract or to pay any costs incurred in the preparation of a proposal in response to this RFP.

B. AWARD

Any award made will be to the Contractor whose proposal is most advantageous to MTC based on the evaluation criteria outlined above.

C. BINDING OFFER

A signed proposal submitted to MTC in response to this RFP shall constitute a binding offer from Contractor to contract with MTC according to the terms of the proposal for a period of one hundred fifty (150) days after its date of submission, which shall be the date proposals or BAFO, if applicable, are due to MTC.

D. CONTRACT ARRANGEMENTS

The contract payment terms will be monthly lump sum payments for ongoing services, which includes all tasks in Project Elements I through IV, except Tasks IIIA and IIIC, which will be paid on a time and materials basis. Lump sum payments will be based on the selected contractor's proposed budget as provided in *Appendix G*. Project Element V will be paid based on the payment terms set out in the task orders for these tasks.

E. SELECTION DISPUTES

A proposer may object to a provision of the RFP on the grounds that it is arbitrary, biased, or unduly restrictive, or to the selection of a particular Contractor on the grounds that MTC procedures, the provisions of the RFP or applicable provisions of federal, state or local law have been violated or inaccurately or inappropriately applied by submitting to the Project Manager a written explanation of the basis for the protest:

1) No later than five (5) working days prior to the date proposals are due, for objections to RFP provisions;
2) No later than three (3) working days after the date on which the proposer is notified that it was found to be nonresponsive; or
3) No later than three (3) working days after the date on which contract award is authorized or the date the proposer is notified that it was not selected, whichever is later, for objections to contractor selection.

Except with regard to initial determinations of nonresponsiveness, the evaluation record shall remain confidential until the Commission authorizes award.

Protests must clearly and specifically describe the basis for the protest in sufficient detail for the MTC review officer to recommend a resolution to the MTC Executive Director.

The MTC Executive Director will respond to the protest in writing, based on the recommendation of a staff review officer. Authorization to award a contract to a particular firm by the Commission shall be deemed conditional until the expiration of the protest period or, if a protest is filed, the issuance of a written response to the protest by the Executive Director.

Should the protesting Proposer wish to appeal the decision of the Executive Director, it may file a written appeal with the Commission, no later than three (3) working days after receipt of the written response from the Executive Director. The Commission's decision will be the final agency decision.

F. PUBLIC RECORDS

This RFP and any material submitted in response to this RFP are subject to public inspection under the California Public Records Act (Government Code § 6250 *et seq*.), unless exempt by law. Other than proprietary information or other information exempt from disclosure by law, the content of proposals submitted to MTC will be made available for inspection consistent with its policy regarding Public Records Act requests.

G. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

1. Terms As Used In This Document

a. "Disadvantaged Business Enterprise" or "DBE" means a for-profit small business concern as defined in Title 49, Part 26.5, Code of Federal Regulations (CFR).

b. "Bidder" also means "proposer" or "offerer."

c. "Agreement" also means "Contract."

d. "Agency" also means the local entity entering into this contract with the Contractor or Consultant.

e. "Small Business" or "SB" is as defined in 49 CFR 26.65.

2. Authority and Responsibility

a. DBEs and other small businesses are strongly encouraged to participate in the performance of Agreements financed in whole or in part with federal funds (See 49 CFR 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs"). The Contractor should ensure that DBEs and other small businesses have the opportunity to participate in the performance of the work that is the subject of this solicitation and should take all necessary and reasonable steps for this assurance. The bidder/proposer shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

b. *Bidders/Proposers are encouraged to use services offered by financial institutions owned and controlled by DBEs.*

3. Submission of DBE Information

"Local Agency Proposer/Bidder-DBE (Consultant Contracts)-Information" form, Appendix J-3 will be included in the Agreement documents to be executed by the successful bidder. The purpose of the form is to collect data required under 49 CFR 26. Even if no DBE participation will be reported, the successful bidder must execute and return the form.

4. DBE Participation General Information

It is the bidder's responsibility to be fully informed regarding the requirements of 49 CFR, Part 26, and the Department's DBE program developed pursuant to the regulations. Particular attention is directed to the following:

a. A DBE must be a small business firm defined pursuant to 13 CFR 121 and be certified through the California Unified Certification Program (CUCP).

b. A certified DBE may participate as a prime contractor, subcontractor, joint venture partner, as a vendor of material or supplies, or as a trucking company.

c. A DBE joint venture partner must be responsible for specific contract items of work or clearly defined portions thereof. Responsibility means actually performing, managing and supervising the work with its own forces. The DBE joint venture partner must share in the capital contribution, control, management, risks and profits of the joint venture commensurate with its ownership interest.

d. A DBE must perform a commercially useful function pursuant to 49 CFR 26.55; that is, a DBE firm must be responsible for the execution of a distinct element of the work and must carry out its responsibility by actually performing, managing and supervising the work.

e. The bidder (prime contractor) shall list only one subcontractor for each portion of work as defined in their bid/proposal and all DBE subcontractors should be listed in the bid/cost proposal list of subcontractors.

f. A prime contractor who is a certified DBE is eligible to claim all of the work in the Agreement toward the DBE participation except that portion of the work to be performed by non-DBE subcontractors.

5. Resources

a. The CUCP database includes the certified DBEs from all certifying agencies participating in the CUCP. If you believe a firm is certified that cannot be located on the database, please contact the Caltrans Office of Certification toll free number 1-866-810-6346 for assistance. Bidder/Proposer may call (916) 440-0539 for web or download assistance.

b. Access the CUCP database from the Department of Transportation, Civil Rights, Business Enterprise Program website at: http://www.dot.ca.gov/hq/bep/.

- Click on the link in the left menu titled Find a Certified Firm
- Click on Query Form link, located in the first sentence
- Click on Certified DBE's (UCP) located on the first line in the center of the page
- Click on Click To Access DBE Query Form
- Searches can be performed by one or more criteria
- Follow instructions on the screen
- "Start Search," "Requery," "Civil Rights Home," and "Caltrans Home" links are located at the bottom of the query form

H. PROMPT PAYMENT OF SUBCONTRACTORS

Under 49 CFR Part 26, Contractors are required promptly to pay subcontractors (DBE and non-DBE) all amounts to which the subcontractors are entitled for work that has been satisfactorily performed and for which the Contractors have received payment, in accordance with the terms of the applicable subcontracts. (See 49 CFR § 26.69.) Accordingly, Contractor shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to the Contractor by the MTC. Any subcontract in excess of $25,000, entered into as a result of this procurement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.

I. PROGRAM ACCESSIBILITY

The Contractor agrees to comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. § 12101 et seq.; Section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; Section 16 of the Federal Transit Act, as amended, 49 U.S.C. § 5310(f); and their implementing regulations. In particular, any web pages shall have text-based options that can be read by text-to-voice systems, and the telephone system shall have a TTY option available.

This project uses Section 255 of the Telecommunications Act of 1996 and Section 508 of the Rehabilitation Act of 1998 as a guideline for providing accessible services. It is the responsibility of Contractor to be familiar with these requirements and how they impact the delivery of RTIS services. It is also the responsibility of Contractor to stay informed of any new acts/laws/regulations that govern accessibility so that the Project can remain compliant with any new acts/laws/regulations.

J. INTELLECTUAL PROPERTY AND WORK PRODUCT OWNERSHIP RIGHTS

1. Ownership and Use of Work Products

The term "Work Products" means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the contract that results from this RFP, (excluding computer software, in both object and source code form; software documentation; and digital maps and other digital databases, all of which are covered

below). Examples of Work Products include, but are not limited to: specifications, drawings, manuals and training materials, technical reports and memoranda, system architecture, electronic data, archived 511data output, and related information. "Work Products" does not include financial, administrative, and cost and pricing information incidental to the Work or confidential information.

Except as described in J.2 below, all Work Products prepared or assembled for MTC and/or furnished to MTC by Contractor or any of its subcontractors under the contract will be the property of and owned by MTC, and copies will be delivered to MTC promptly upon completion of the Work; upon earlier termination of the contract; or at any time during the term of the contract at the request of MTC, whichever is earliest. The resulting contract will require the 511 Contractor to assign to MTC ownership of all right, title and interest in and to such Work Products, including ownership of the entire copyright in the Work Products, and agree to execute all papers necessary for MTC to perfect its ownership of the entire copyright in the Work Products. Proprietary information used to create Work Products will not be included.

Except with respect to dissemination or use of data specified in the contract, neither the 511 Traffic Contractor nor its subcontractors will be permitted to use or disseminate any MTC Work Products without the prior written approval of MTC. A draft Work Product will be considered by MTC to be confidential information unless it is either incorporated into a Work Product that becomes a public document or released by MTC to the public in another form. Neither the 511 Traffic Contractor nor its subcontractors will be permitted to use, publish, or base other work on such draft Work Products, without the prior written consent of MTC.

Any Proprietary Work Products developed by the 511 Traffic Contractor prior to or separate from the resulting contract and furnished to MTC under the contract will be furnished to the project through a grant of license to MTC by the 511 Traffic Contractor or its subcontractor(s) when introduced into the Project.

Any grant of license to Proprietary Work Products by the 511 Traffic Contractor must be royalty-free and assignable, granting MTC the right to use, copy, publish or disclose such Proprietary Work Products for the benefit of the Project, effective upon Contractor's 80% completion of the Task Order of which the Work Product is part and payment of all amounts due Contractor for the work (less applicable retentions) up to that date. The duration of the license will be as specified in the Contract.

MTC agrees to maintain the confidentiality of Proprietary Work Products, and to require any agents or third party to whom MTC discloses such Work Products to execute a nondisclosure agreement, the terms of which will be provided in advance to Contractor for review and comment.

2. Software Requirements

Ownership by MTC of 511 Software is not a requirement, except for Restrictive Software created specifically by the 511 Traffic Contractor or one of its subcontractors for the

Project and funded under the contract that results from this procurement ("MTC Software").

In general, the provision of Restrictive 511 Software is discouraged. "Restrictive Software" is defined as custom-designed software; modified versions of available software; or specialized software no longer commercially available or for which interfaces (a) do not exist, (b) will not be provided as part of the Work, or (c) cannot be readily developed by a qualified third party. Software meeting ISO or National ITS standards or commercially available software is required if available.

To the extent the 511 Traffic Contractor furnishes as 511 Software any Restrictive Software created specifically by the contractor or one of its subcontractors for the Project and funded under the contract with MTC ("MTC Software"), such as interfaces designed specifically for 511, the MTC Work Product ownership provisions shall apply. Ownership of such MTC Software shall mean ownership of the entire copyright to the executable code and documentation (including training materials), compilable source code and source code documentation, and any modifications, revisions, upgrades or derivative works created during the term of the 511 Traffic Contract. **MTC and the 511 Traffic Contractor will agree, in advance of Contract execution, on which 511 Software is MTC Software, and such MTC Software will be identified in a Detailed List of Software.**

MTC will grant to the 511 Traffic Contractor a royalty-free, non-exclusive license to use, translate, reproduce, modify, adapt and create derivative works from, and to license third parties for such purposes, MTC Software, including source code and source documentation. Permitted uses include research, development and commercial. This grant of license will not apply to modifications, upgrades, adaptations, or derivative works developed by MTC or an MTC third party contractor. As a condition of this grant of license, the 511 Traffic Contractor will be required to promptly inform MTC when it develops translations, modifications, adaptations, derivative works or upgrades to MTC Software under this grant of license, and to grant to MTC a reciprocal royalty-free, non-exclusive license for 511 purposes, to use, translate, reproduce, modify, adapt and create derivative works from, and to license to third parties for such purposes, any translations, modifications, adaptations, derivative works or upgrades developed by the 511 Traffic Contractor pursuant to this grant of license. MTC will require the 511 Traffic Contractor to deposit the source code for such translations, modification, adaptation, derivative works or upgrades in an escrow account, along with its documentation, or furnished to MTC upon MTC's request, if the 511 Traffic Contractor does not establish such escrow account for any reason.

To the extent the 511 Traffic Contractor furnishes as 511 Software any Restrictive Software owned by the 511 Traffic Contractor or one of its subcontractors, including customized software substantially modified for the Project under the Contract that results from this procurement, the 511 Traffic Contractor will be required to grant to MTC, and to require any applicable Subcontractor also to grant to MTC, a royalty-free, non-exclusive license to use, translate, reproduce, modify, adapt and create derivative works

from, and to license third parties for such purposes, all such software, including its source code and source code documentation, for the benefit and operation of the Project. Such license will be effective upon 80% completion of the task or Task Order covering such software and payment of all amounts (less any retentions) due the 511 Traffic Contractor for the work up to that date. Pursuant to this grant of license, the 511 Traffic Contractor will be required to make available to MTC, upon such request, the source code and source code documentation for such software, along with a list of all applicable software development tools, i.e., all software required to edit/alter the source code and successfully recompile and operate the software, including operating systems, libraries, tools and utilities, data base structures and code and compilers. Any such development tools that are themselves Restrictive Software must be made available to MTC to the extent necessary for MTC to exercise its rights per the contract.

The 511 Traffic Contractor will also be required to place the source code for all Restrictive Software that has been placed under configuration management and control in a software escrow account, accompanied by detailed source code documentation, including a list of applicable software development tool, as described above. Such escrow account must be updated with respect to all source code in the account at least annually, or earlier, if the 511 Traffic Contractor issues an update that contains substantial revisions to the software then retained in escrow. **The cost of maintaining such escrow is included in the Contract Price.**

MTC will agree to maintain the confidentiality of all software, code and documentation licensed under this Article and to require any agents or third party contractors to whom MTC discloses such software to execute a non-disclosure agreement, the terms of which will be provided in advance to the 511 Traffic Contractor for review and comment.

The 511 Traffic Contractor will be required to secure and administer all licenses or sublicenses for standardized commercially available software used for the Project and to provide to MTC copies of such licenses, along with any documentation provided by the third party suppliers. The 511 Traffic Contractor will not be required to furnish to MTC the source code to third party software, the right to make copies (other than back-up or archival copies), the right to modify, or the right to disclose the software to third party contractors. However, the 511 Traffic Contractor will secure licenses to commercial software that authorize MTC to allow third parties to use such software in connection with the Project.

At least six months prior to the end of the Contract term, the 511 Traffic Contractor will be required to begin efforts either to assign such licenses or sublicenses to MTC or MTC's designee or, if such assignments are not practicable, to provide MTC with sufficient information to enable it to secure the licenses or sublicenses necessary for the continued operation of the Project.

The only grounds for termination of a software license granted under the resulting 511 Traffic contract will be failure on the part of MTC to complete payment for such licenses

or willful or reckless breach by either party of a restriction on use of such license or of the contract's confidentiality provisions.

K. PROHIBITION ON USING CHP INFORMATION

In addition to the restrictions on use and disclosure of Confidential Information set forth in Section K above, Contractor is prohibited from disclosing, broadcasting or otherwise using Confidential Information received directly from the California Highway Patrol ("CHP") and not through MTC. Willful disclosure of such information or disclosure resulting from the gross negligence of Contractor shall result in the imposition of a monetary fine in the amount of $25,000 for the first occurrence and $50,000 for any occurrence thereafter. The designation of information as Confidential shall be solely the prerogative of CHP.

L. OWNERSHIP OF PROJECT EQUIPMENT AND SUPPLIES

Upon Project Completion, MTC shall own all equipment, including computer hardware, and supplies purchased under this Contract and still useful in the operation of the project when Project Completion is attained.

APPENDIX A SCOPE OF WORK

Table of Contents

I. PROJECT MANAGEMENT

A. Project Planning

1. Develop and Maintain a Five-Year Strategic Plan

   The initial plan shall be based on the Five-Year Work Plan presented in the selected proposal. The plan shall be updated annually using input from the annual strategy planning session (Task I.A.4), the summary of past year highlights (included in Task I.A.5), customer feedback (Task I.B.3) and other sources. The Five-Year Strategic Plan shall include:

   a. A five-year schedule for implementing project enhancements, new strategies, approaches and technologies showing the duration for performing work (i.e., a "task-order queue" for Project Element V and *Appendix C*); the strategic plan shall summarize the analysis and assessment that led to the recommended schedule,
   b. A five-year schedule for optimizing the system (i.e., work that shall take less than 50 hours that is done as part of ongoing project maintenance) (Subtasks II.A.6, II.B.4, IV.A.5, IV.B.5, IV.C.7); the strategic plan shall summarize the analysis and assessment that led to the recommended schedule,
   c. An updated Equipment Replacement/System Lifecycle Plan and Schedule (See *Appendix B)*,
   d. A five-year schedule of strategies to reduce project costs and/or make the project more cost-effective; the strategic plan shall summarize the analysis and assessment that led to the recommendations,
   e. A five-year schedule of strategies to add value to 511, such as partnerships, service exchanges, selling data, advertising, subscription services for end users, etc., including potential net revenue, impacts on users, revenue management, partnership management etc. The strategic plan shall summarize the analysis and assessment that led to the recommendations,
   f. A five-year data collection strategy including whether current data collection sources are optimum with respect to cost and quality compared to other sources available or becoming available (e.g., Sensys from CMIA projects and probe data from GEMS and Nokia). The strategic plan shall summarize the analysis and assessment that lad to the recommended approach,
   g. Analysis and assessment of strategies to improve privacy protections, and
   h. Additional analysis and assessments as requested by MTC, including the strategies considered, issued analyzed, resulting recommendations, and provide action plans.

2. Monitor and assess changing technology and industry trends

   a. Stay informed of changing technology and industry trends related to any aspect of this project, MTC's overall 511 project, MTC's other customer service projects in as much as these things can impact this project.
   b. Understand the capabilities of new technologies and their potential benefits to the project.
   c. Stay informed of the latest available San Francisco Bay Area Regional ITS architecture and standards.

d. Stay informed about the telecommunications environment, data ownership on state right of way, etc.

3. Maintain a list of potential project optimizations (Subtasks II.A.6, II.B.4, IV.A.5, IV.B.5, IV.C.7) or enhancements (Project Element V and Appendix C). Use customer feedback (Task I.B), website and phone statistics and reports (Task I.E), input from MTC, input from TIC staff, and Contractor experience to develop the list. Maintain the list through a Web-based tool (Task I.C).

4. Lead an annual strategy planning session with MTC and/or the project change control board (Task I.D.3) to:
   a. Review and discuss any completed analyses (Tasks I.A.1)
   b. Review and prioritize the list of potential project optimizations and enhancements (Task I.A.1.b)
   c. Review the draft five-year strategic plan (Task I.A.1)
   d. Recommend specific strategies for graduation from the five-year strategic plan to the next Annual Work Plan (Task I.A.5)

5. Develop an Annual Work Plan

   Annually develop and deliver for MTC's approval "The 511 Traffic, Phone & Real-Time Transit Annual Work Plan." The Annual Work Plan may be updated during the course of the fiscal year upon request of MTC or Contractor, and after written approval of the MTC Project Manager. The Annual Work Plan shall include:
   a. A description of how the Contractor will implement each Scope of Work task in the coming year;
   b. A description of the optimizations that shall be pursued in the coming year as informed by Task I.A.1;
   c. A descriptive list of the task orders and their deliverables that shall be pursued in the coming year as informed by Task I.A.1;
   d. A spreadsheet showing task deliverables for the coming year and their due dates;
   e. A Project Budget by Task for the year;
   f. A detailed Project Schedule (e.g., critical path, duration, phasing) showing how tasks will be developed and implemented during the remainder of the contract period and dependencies among tasks;
   g. Requests or suggestions for revising or modifying the project performance standards as appropriate;
   h. A list of system equipment and components that will be upgraded or replaced in the coming year as informed by Task I.A.1
   i. A summary of the past year highlighting (to the extent known at time of plan submittal) performance, objectives and outcomes, issues encountered, customer feedback trends, cost estimates vs. final costs, lessons learned, and suggestions for modifications to the program or the contract.

6. Track the status of and progress on the Annual Work Plan during the course of the year by maintaining a spreadsheet on ProjectSolve (or other tool that allows MTC and Contractor staff to assign follow up, enter status updates, and check status at any time) that records the status of project tasks and deliverables; including assignments, progress and next steps as applicable. Also include issues and needs that arise during

the course of the year, their related action items, solutions, and implications for the Five-Year Strategic Plan (Task I.A.1) or future Annual Work Plans.

Deliverables

Task/Subtask	Deliverable	Frequency
I.A.1	Five-year strategic plan	July 31, 2009 March 31, 2010 March 31, 2011 March 31, 2012
I.A. 2	"Watchlist" of new technology provided in a web-based format (e.g., ProjectSolve) that summarizes each technology, its capabilities, its pros and cons, applicability to the project, etc.	Begin list development 7/1/09 Update list as information about technology becomes available and no less frequently than quarterly.
I.A.3	Web-based list of potential project optimizations and enhancements (e.g., maintain list on ProjectSolve)	Begin list development 7/1/09 Update list as new ideas are generated and no less frequently than quarterly.
I.A.4	Annual strategy planning session	February 1, 2010 February 1, 2011 February 1, 2012 February 1, 2013 February 1, 2014
I.A.5	Annual Work Plan	Annually Final YR1: 7/31/09 Draft YR2: 3/31/10 Final YR2: 5/31/10 Draft YR3: 3/31/11 Final YR3: 5/31/11 Draft YR4: 3/31/12 Final YR4: 5/31/12 Draft YR5: 3/31/13 Final YR5: 5/31/13
I.A.6	Annual Work Plan Status spreadsheet (or other tool)	Tool must be set up by 9/30/09. Update status on a monthly basis.

B. Project Administration

1. Prepare and submit monthly invoices within 30 days of the end of the billable month documenting current and cumulative expenses by task, for Contractor and subcontractors including:
   - Original fiscal year budget,

- Hours and dollars (by employee) billed for the current month,
- Dollar amount invoiced to date,
- Remaining budget,
- Percentage of the work completed, and
- Estimated cost to complete for budget items.

2. Submit monthly progress reports to MTC within 30 days of the end of the month that are organized into two sections – one for operations and maintenance and one for development work. Each should include the following information:
   - A description of the significant activities that occurred during the month;
   - A log of issues that occurred during the month, how they were resolved and/or resolution strategies on-going/forthcoming including proposed maintenance strategies and ideas for enhancement;
   - Budget concerns, such as the possible need for reallocation, potential cost overruns or cash flow problems;
   - An updated project schedule (may be a link to updated schedule on ProjectSolve);
   - A discussion about issues and successes with schedule adherence and strategies for maintaining schedule adherence;
   - Status of tasks or activities of interest to MTC;
   - DBE Utilization;
   - Monthly statistic reports and analysis of performance and trends;
   - Customer comment reports/summary and analysis of trends; and
   - Payment reduction calculations
3. Provide Customer Care Services
   a. Manage and respond to customer comments received through both the phone and web pertaining to traffic and real-time transit services. Review user comments sent to the website and phone on each weekday, and respond to, close, or assign them for further action within a day of receipt.
   b. Develop and implement a "thank you for your comment" auto-response feature to provide an immediate thank you upon receipt of a comment
   c. Analyze customer comments to understand how the system can be improved. Use this analysis in strategic planning (Task I.A.1) to recommend system changes to MTC.
   d. Provide a monthly customer comment report including a comment log, the numbers of comments by category, by the different features, by trend (e.g., positive/negative), by theme (e.g., multiple comments related to the same thing), and the total number of comments. The report should explain how comments were affected by system issues occurring that month, explain how comments were dealt with and summarize outstanding issues or comments that have not been responded to.
4. Following a thorough assessment (Task I.A.1) and approval by MTC, implement strategies to add value to 511. Negotiate relationships with private sector partners and enter into business agreements and contracts with third-parties. Enter into agreements with MTC to manage any revenue generated by the project.

5. Provide administration from office space located in the nine-county Bay Area, preferably close to the MTC offices (e.g., within 10 miles) and readily accessible by transit, so that the trip takes no longer than thirty minutes. Be available to MTC Monday through Friday from 8 AM to 5 PM when MTC is operating and be available 24 hours, 7 days per week to respond to emergencies.
6. Conform to the 511 Privacy Policy (available at http://www.511.org/copyright_items/privacy.asp) when performing all contract activities. Conduct staff training to ensure that all Contractor staff are aware of and expected to support the 511 Privacy Policy.
7. Work with MTC to identify a privacy consultant to conduct a bi-annual privacy assessment that will be paid for through this contract.

Deliverables

Task/Subtask	Deliverable	Frequency
I.B.1	Monthly Invoices	Monthly within 30 days of the end of the billable month
I.B.2	Monthly Progress Reports	Monthly within 30 days of the end of the billable month
I.B.3	Customer comment auto-response feature Customer Comment Reports	Have up and running by 12/31/09. Provide auto-responses ongoing and continuously thereafter. Monthly along with Deliverable I.B.2
I.B.4	Value-added services and/or revenue generated on behalf of the project	Based on approved value-added strategy (Task I.A.1)
I.B.5	Local office space	By 9/30/09 and then maintained throughout the contract period.
I.B.6	Staff training on 511 privacy policy	Whenever changes are made to the privacy policy and not less than annually
I.B.7	Bi-annual privacy assessment produced by a third party	3/31/11 3/31/13

C. Project Management Tools

1. Maintain the project's web-based document storage system (ProjectSolve). Store project documents, including all correspondence sent by the Contractor concerning the Project, in folders organized following the SOW task organization. Provide access to allow MTC staff to see and manage documentation as necessary.

2. Track technical issues with the project's web-based Bugzilla or another comparable product. Provide access to allow MTC and Contractor staff to manage and understand issues, fixes, assignments, next steps, etc.
3. Provide and maintain a web-based tool to track, categorize, manage and respond to customer comments to facilitate Task I.B.3. (This shall initially be for the 511 traffic services and real-time transit, but could potentially expand to include all 511 phone and web services per Project Element V and *Appendix C, Enhancements*.)
4. Provide and maintain a web-based "configuration management diary" to track the status of system changes and related maintenance activity, to document system changes and to track action items. Provide access to allow MTC and Contractor staff to assign follow up, enter status updates, and check status at any time. Provide a monthly diary report.
5. Maintain the System Reliability Database per the functional requirements provided in *Appendix A-2, Functional Requirements*. (TIC Staff are responsible for entering data into the database according to the TIC SOP.)

Deliverables

Task/Subtask	Deliverable	Frequency
I.C.1	Updated, maintained ProjectSolve website	Ongoing
I.C.2	Updated, maintained bug-tracking software	Ongoing
I.C.3	Customer comment management tool	Finalize system by December 31, 2009
I.C.4	Configuration management diary	Finalize tool by June 30, 2010 and provide monthly reports thereafter.
I.C.5	System Availability Report	Monthly – part of monthly progress report

D. Project Coordination

1. Coordinate team members to provide consistent staffing resources, maintain effective communications within the team, and ensure that changes to the project are well-planned and coordinated.
2. Prepare for and lead bi-weekly project meetings with the MTC project staff. Manage project action item list.
3. Support a project oversight committee comprised of members who shall consider the impacts of overall project strategy and direction on ongoing operations. The board will also consider issues related to specific enhancements. At a minimum, the board will meet annually to discuss and guide the Five-Year Strategic Plan (Task I.A.1).
4. Support MTC's on-going efforts to coordinate information sharing and project development with project partners, public transit operators, jurisdictions neighboring

the San Francisco Bay Area, other 511s, other public agencies, researchers, visitors, other MTC contractors, and other interested parties including attending meetings, preparing information, etc. Coordinate with Caltrans' statewide traveler information initiatives.

5. Coordinate and lead tours of the TIC at MTC's request.
6. Provide input and feedback into marketing plans and activities.
7. Provide legislative activity support as needed, including:
   a. Monitoring issues related to this project, such as the telecommunications environment, data ownership on state right of way, etc.
   b. Developing petitions, draft rule-makings or draft legislation,
   c. Coordinating filings,
   d. Meeting with decision-makers, and
   e. Collaborating with other stakeholders
8. Track and manage subcontracts and other project agreements per the database functional requirements described in *Appendix A-2, Functional Requirements*.
9. Be responsible for all contractual, technical, legal, and administrative aspects associated with maintaining the FCC designation for 511 in the nine-county S.F. Bay area.

Deliverables

Task/Subtask	Deliverable	Frequency
I.D.1	Effective project team	On-going
I.D.2	MTC – Contractor meetings	Bi-weekly
I.D.3	Project oversight committee meeting participation and minutes	Annual strategy meetings per Task I.A.4 Additional meetings as needed
I.D.4	Documents to support MTC's information sharing efforts	As requested by MTC
I.D.5	TIC Tours	Up to ten per year
I.D.6	Marketing support	Approximately once per year
I.D.7	Materials needed for legislative activity support	Rarely – less than once per year
I.D.8	Subcontracts and agreements database report showing pending, current and closed subcontracts and agreements	Provide quarterly
I.D.9	Materials needed for contractual, technical, legal, and administrative management related to maintaining the FCC designation for 511	Rarely – less than once per year

E. Reporting and Statistics

1. Provide phone and web usage tracking process(es) and tool(s) to track usage of the 511 phone system and traffic.511.org. These processes and tools currently include a backend phone tool, SQL Web Reports and WebTrends.
2. Maintain and generate a standard set of reports documenting usage of the 511 phone service, including calls, requests, results generated, etc. Provide reports on a weekly and monthly basis, but maintain the capability to generate reports for other specific durations (e.g., daily, several weeks, etc.) as well as special-needs reports. Sample reports are available at http://www.mtc.ca.gov/jobs/.
3. Maintain and generate a standard set of reports documenting usage of traffic.511.org according to the Website Usage Tracking functional requirements provided in *Appendix A-2, Functional Requirements*. A screenshot of the website statistic-generation dashboard is available at http://www.mtc.ca.gov/jobs/.
4. Analyze the monthly user statistics. Assess trends, spikes, unusual occurrences, etc. Run additional statistical reports to support such analysis as needed or as requested by MTC to assess consumer trends and preferences. Use analysis to inform capacity, scalability and redundancy strategies.
5. Provide data and/or statistics to facilitate monthly performance monitoring conducted by MTC and/or MTC's performance monitoring contractor, including data collection reports and voice recognition reports.

Deliverables

Task/Subtask	Deliverable	Frequency
I.E.1	A standard set of comprehensive 511 phone reports. (A sample of the current reports is available at http://www.mtc.ca.gov/jobs/)	Weekly
	A standard set of comprehensive 511 phone reports. (A sample of the current reports is available at http://www.mtc.ca.gov/jobs/)	Monthly; provided with the monthly progress report
I.E.2	A standard set of comprehensive 511 phone reports. (A screenshot of the website statistic-generation dashboard is available at http://www.mtc.ca.gov/jobs/)	Weekly
I.E.3	Trend Analysis and Conclusions about phone usage and traffic.511.org	Monthly
I.E.4	Statistics and data to facilitate performance monitoring	Monthly

F. Program Transitions (Subtasks 1 – 2 apply only if a new Contractor is selected)

1. Work with the existing project Contractor(s) for a maximum of six months to transition project responsibilities at the start of the contract period and facilitate all necessary technical and procedural training. Transition may be shortened on approval

by MTC, if MTC determines it can be conducted acceptably within a shorter time period.

2. Start independent operation of the 511 Traffic Contract no later than January 1, 2010.
3. Train others designated by MTC to transition any task(s) identified as a renewable service in Project Element IV if MTC exercises its option to not renew the task.
4. Prepare all documents requested by MTC needed to support the preparation of the next Request for Proposal.
5. Prepare a project transition plan six months before the end of the contract period detailing steps to successfully transition project responsibilities.
6. Work with future project Contractor(s) for at least four (4) months and not longer then six (6) months to transition project responsibilities at the end of the contract period, including providing all necessary technical and procedural training.

Deliverables

Task/Subtask	Deliverable	Frequency
I.F.1	Finalized transition plan	July 1, 2009
I.F.2	Training sessions, documentation, training materials	Up to four times over five years, in the event that a renewable task is not renewed
I.F.3	Documents necessary to develop next procurement	Once; As early as January 2012
I.F.4	Project Transition Plan	Once; As early as January 2012
I.F.5	Successful transition to the next contractor	Once; As early as July 2012 for 4 – 6 months

II. DATA COLLECTION AND PROCESSING

A. Operate and Maintain the Traffic Data Collection System

1. Operate and maintain the 511 traffic data collection system components -- field equipment, communications links, power supplies, interfaces, software systems, database management, network management, and sub-contracts in place at the time of the contract start date (listed in *Appendix A-1*, *Existing System*) -- until they are replaced with new components. Operate and maintain new system components. Operate and maintain the system continuously and ongoing, including during highway construction projects. Manage data collection from Caltrans loop detectors and other traffic data collection sensors.
2. Implement a program of routine, preventative maintenance; troubleshoot and fix system failures; repair equipment; respond to and recover from hardware and software outages; backup the system data; and archive the backup media to ensure the system is performing optimally and to meet the functional requirements described in

Appendix A-2, Functional Requirements and the performance standards described in Appendix *A-3, Project Performance Standards and Penalty Assessments*.

3. Maintain and/or enter into agreements with third-party traffic data providers for the purchase of traffic data and coordinate with project partners (e.g., Caltrans) to ensure consistent, accurate and current data delivery. Monitor third-party provided traffic data and work with the provider to ensure the data meets the functional requirements described in *Appendix A-2, Functional Requirements* and the performance standards described in Appendix *A-3, Project Performance Standards and Penalty Assessments*.
4. Evaluate and purchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effect performance. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
5. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
6. Optimize data collection. Optimization tasks that are considered on-going maintenance shall be identified annually through Tasks I.A.1 and I.A.5 (Five-Year Strategic Plan and the Annual Work Plan). For year one, tasks include minimizing use of the Link Data Interpolated (LDI) to improve data accuracy.
7. Perform routine and preventative maintenance work on data collection devices (antennae/readers, modems, power supply) in Caltrans' Right of Way in accordance with the terms of Caltrans' encroachment permit(s). Obtain and maintain valid encroachment permit(s).
8. Maintain, and update as needed, a database and map of field sites where MTC data collection equipment has been deployed.
9. Maintain an adequate supply of reader parts and replacement batteries to repair non-functional readers per the functional requirements. Maintain an adequate supply of modems to repair non-functional modems per the functional requirements.
10. Review monthly performance monitoring reports to identify roadway sections with inadequate or non-functional data sources. Determine data collection solutions for the problematic roadway sections.
11. Develop and implement QA/QC strategies to control data quality.
12. Monitor data collection sources on a daily basis using the 511 system administrator's daily reports, the data collection project utilities on http://lan.511.org/Otherstuff.html and users' suggestions and complaints
13. Manage Data Collection and Data Processing Equipment and Software Inventory
    - Affix MTC property labels to all purchased equipment.

- Affix MTC bar-coded labels to all purchased equipment costing more than $5,000 and provide the equipment description and label number to MTC Project Manager.
- Maintain all equipment and software user manuals.
- Maintain and update the project's equipment and software inventory database.
- Generate monthly reports from the database showing equipment/software status and maintain these reports in the on-line project management files.

Deliverables

Task/Subtask	Deliverable	Frequency
II.A.1	Traffic data collection system components that meet functional requirements and performance standards	Continuously
II.A.2	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.A.3	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.A.4	Evaluations of new hardware, software, etc.	Annually
II.A.5	Installation of new hardware, software, etc., including test procedures, testing and configuration of equipment to meet functional requirements	Initially as defined in *Appendix B* and as subsequently defined through the updated five-year project plan (Task I.A.1) and Annual Work Plan (Task I.A.5)
II.A.6	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
II.A.6	LDI Analysis	Complete by January 31, 2010
II.A.7	Valid encroachment permit(s).	Ongoing
II.A.8	Updated and maintained database and map of MTC data collection field sites	As changes occur or biannually
II.A.9	Receipt of equipment delivery Spare part inventory	Upon receipt July 1 each year starting 2010
II.A.10	Identification of data collection trouble-spots and remedies	Monthly
II.A.11	QA/QC strategy	December 31, 2009
II.A.12	511 System Administrator's Daily Reports	Daily
II.A.13	Equipment/software status reports	Monthly

B. Process Traffic Data

1. Operate and maintain the data processing systems and equipment at the time of the contract start date (listed in *Appendix A-1, Existing System*) until they are replaced with new components. Implement, operate and maintain new System components.
2. Implement a program of routine, preventative maintenance; troubleshoot and fix the data processing hardware and software; respond to and recover from hardware and software outages; backup the processed data; and archive the backup media to ensure the traffic data processing system performs optimally and to meet the functional requirements described in *Appendix A-2, Functional Requirements* and the performance standards described in Appendix *A-3, Project Performance Standards and Penalty Assessments*.
3. Process data to provide the core features and functions of traffic.511.org and the 511 Phone Service (e.g., the 511 traffic map, driving times, MY 511, historical driving times).
4. Optimize data processing (software, algorithms, etc.) in order to produce accurate traffic conditions information at all times including periods of low traffic flow. Specific challenges include ensuring that traffic data for driving times on CMS are accurate and that driving times across bridges are accurate. Optimization tasks that are considered on-going maintenance shall be identified annually in Task I.A (Project Planning).
5. Evaluate and purchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effective performance. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
6. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
7. Maintain the Caltrans Reverse Datafeed to Caltrans via the existing interface.
8. Actively promote the 511 traffic data feed (TOMS - TravInfo Open Messaging Service -, or its functional equivalent) to 511 Information Service Providers (ISPs). Maintain the current ISP agreement and execute it with ISPs when requested. Maintain a list of traffic data feed recipients. Collect and track ISP usage data in a revised reporting format approved by MTC. (A sample of the current report t is available at http://www.mtc.ca.gov/jobs/.)
9. Maintain the Application Programming Interface (API) to allow external parties to create specialty applications using 511 data and make all processed and original 511 traffic data that is not restricted by privacy constraints or data purchase contracts available to the public for the purpose of developing 511 specialty applications. Develop and maintain agreements allowing access to the API to interested third parties and execute agreements when requested.

10. Maintain an on-line or disk archive of historical traffic data.
11. Provide link and trip travel time data for special requests from MTC via text email.

Deliverables

Task/Subtask	Deliverable	Frequency
II.B.1	Traffic data processing system components that meet functional requirements and performance standards	Continuously
II.B.2	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.B.3	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.B.4a	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
II.B.4b	Implement, test and maintain Smart Data Merge algorithm	In approximately five locations by 6/30/10
II.B.5	Evaluations of new hardware, software, etc.	Annually
II.B.6	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
II.B.7	Caltrans Reverse Datafeed available to partner agencies	Continuously and ongoing
II.B.8	511 Traffic data available to the public for development purposes. Third party data feed agreement	Continuously and ongoing Develop template by 9/30/09 Execute as requested by third parties
II.B.9	511 Traffic data feed (TOMS or its functional equivalent) ISP Agreement ISP usage report	Continuously and ongoing Execute as requested by third parties Provide revised template by 8/31/09 Include in the monthly progress report (Task I.B.2) no longer than one

		month in arrears.
II.B.10	On-line or disk archive of historical traffic data	Ongoing
II.B.11	Link and/or trip travel time data	Within 7 days of request

C. Operate the 511 Traveler Information Center (TIC)

1. Review and update the existing TIC Standard Operating Procedures (SOPs) (*See, The Traveler Information Center (TIC) Standard Operating Procedures* provided at http://www.mtc.ca.gov/jobs/ whenever system changes affect TIC Operations, and not less than annually.
2. Operate and staff the Traveler Information Center (TIC) 24 hours a day, 365 days per year in accordance with *The Traveler Information Center (TIC) Standard Operating Procedures* provided at http://www.mtc.ca.gov/jobs/ (or its update) and the functional requirements described in *Appendix A-2, Functional Requirements*.
3. Update the *511 Operations and Maintenance Manual* provided at http://www.mtc.ca.gov/jobs/whenever system changes affect TIC Operations, and not less than annually. This manual provides "how-to" instructions for operating the different TIC applications and systems.
4. Train all new and current TIC staff and non-TIC staff, as appropriate, on the TIC SOPs (Task II.C.1) and the 511 O & M Manual (Task II.C.3) whenever changes are made to the TIC SOPs or O & M Manual or at least every six months. Train all TIC staff on 511 privacy policies and on procedures to ensure protection of sensitive data and compliance with MTC policies.
5. Per MTC's Cooperative Agreement with Caltrans, maintain the current TIC at Caltrans District 4 headquarters. Comply with California Department of Transportation District 4 requirements for the use of the TIC space.
6. Operate and maintain the office assets (furniture, computers, etc.) in place at the time of the contract start date (listed in *Appendix A-1, Existing System)* until they are replaced. Replace equipment as described in *Appendix B, System Replacement Needs* and as directed by the Annual Work Plans (Task I.A.5).
7. Evaluate and purchase replacement and/or additional TIC equipment needed to optimize TIC functionality. Additional equipment needs shall be identified annually through Task I.A (Project Planning). For year one, additional equipment needed includes: a modern wall-mounted video display in the TIC to display the 511 traffic map. Screen should be large enough so that the traffic map details are visible for operators and tour attendees. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
8. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
9. Coordinate TIC Operations with Caltrans District 4 Transportation Management Center staff and California Highway Patrol staff. Convene meetings with Caltrans and

CHP staff as needed (likely quarterly) to review responses to traffic incidents and share suggestions for improved future response.

Deliverables

Task/Subtask	Deliverable	Frequency
II.C.1	TIC SOPs	Update as needed and not less than annually
II.C.2	Staffed and functioning TIC	Continuously 24/7
II.C.3	511 Operations and Maintenance Manual	Update as needed and not less than annually
II.C.4	Emails to the MTC Project Manager about TIC staff trainings: schedule, agenda, attendance, etc.	At least every six months or whenever changes are made to the TIC SOPs or O & M Manual or whenever staff changes occur (whichever is shorter)
II.C.5	Staffed and functioning TIC located at Caltrans District 4 headquarters	Continuously 24/7
II.C.6	TIC equipment	Continuously 24/7
II.C.7 - 8	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
II.C.9	Meetings with Caltrans and CHP staff	Four to six per year

III. EMERGENCY RESPONSE

A. Planned Disruptions

1. Attend meetings and coordinate with partners to prepare for planned disruptions (e.g., major transit service disruptions, major construction project, etc.).
2. Collect and disseminate transportation information regarding planned events, construction activities, scheduled delays, lane closures, etc. as often as necessary for the nine Bay Area counties from all available sources including Caltrans, local public agencies, major event organizers, sport organizations, etc.
3. Provide system usage reports to partners during and at the end of the incident.

Deliverables

Task/Subtask	Deliverable	Frequency
III.A.1	Attend meetings	One week in advance of planned disruptions
III.A.2	Information and data related to the planned disruption integrated into 511 data and disseminated through the phone and web	As needed
III.A.3	System usage reports related to the planned disruption	As needed

B. Emergency Preparedness

1. Proactively manage system capacity and redundancy issues (e.g., system availability, peaking problems, loading problems) to be prepared for an emergency. Monitor capacity needs and make recommendations if existing capacity is insufficient.
2. Maintain emergency response features, functions and tools to meet the functional requirements defined in *Appendix A-2, Functional Requirements*.
3. Update and maintain Emergency Operating Plan (EOP) for the TIC and Contractor staff.
4. Train all Contractor staff at least annually on the Emergency Operating Procedures. Training course should be a minimum of 8 hours and be mandatory for all TIC staff.

Deliverables

Task/Subtask	Deliverable	Frequency
III.B.1	Recommendations regarding system capacity and appropriate redundancies needed to respond to emergencies	Annually; include in annual update to Five-Year Strategic Plan
III.B.2	Emergency response features and functions maintained to meet the functional requirements	Ongoing
III.B.3	Emergency Operating Plan	Annual review and update

III.B.4	Mandatory 8-hour TIC staff training	Annually; Conduct first training by 9/30/09

C. Respond to Unplanned Emergencies

1. Assist MTC with minimal notice and provide emergency response resources per the functional requirements defined in *Appendix A-2, Functional Requirements*.
   •
2. Develop and maintain an hourly staffing plan with assigned personnel and responsibilities.
3. Follow the procedures of the TIC Emergency Operating Plan (EOP).
4. Continually collect and disseminate disaster related information available from regional emergency management centers, Caltrans, CHP, MTC and 511's regular sources during emergencies.
5. Implement emergency response tools (e.g., The Emergency Abbreviated System (EAS) for the Web and/or Phone) and procedures within twenty (20) minutes of being instructed by MTC to do so.
6. Maintain the system during an emergency and monitor system performance.
7. Attend meetings and coordinate with partners.
8. Provide system usage reports to partners during and at the end of the incident.

Deliverables

Task/Subtask	Deliverable	Frequency
III.C.1	Required staffing resources	When an unplanned emergency occurs
III.C.2	Emergency staffing plans	Throughout the course of an unplanned emergency
III.C.3 - 5	Emergency related information disseminated through 511	Throughout the course of an unplanned emergency
III.C.6	Operational system	Throughout the course of an unplanned emergency
III.C.7	Meetings	Throughout the course of an unplanned emergency
III.C.8	Emergency usage reports	During and following an emergency

IV. RENEWABLE SERVICES

A. Operate and Maintain Web Services for Traffic.511.org, Real-Time Transit and MY 511

1. Implement a program of routine, preventative maintenance; troubleshoot and fix system failures; repair equipment; respond to and recover from hardware and

software outages; backup the system data; and archive the backup media to ensure that the system components of traffic.511.org are performing optimally and to meet the functional requirements described in *Appendix A-2, Functional Requirements* and the performance standards described in *Appendix A-3, Project Performance Standards and Payment Deductions*. Maintain all website system components in place at the time of the contract start date (listed in *Appendix A-1, Existing System*) until they are replaced with new components. Operate and maintain new system components.

2. Host – or manage the hosting - of traffic.511.org per the functional requirements described in *Appendix A-2, Functional Requirements*.

3. Operate and maintain the following data dissemination features and functions to meet the functional requirements described in *Appendix A-2, Functional Requirements* and the performance standards described in *Appendix A-3, Project Performance Standards and Payment Deductions*.
   a. Traffic.511.org
   b. The 511 traffic map,
   c. Driving times,
   d. MY 511^{SM},
   e. Historical driving times (typical/average driving times),
   f. Tickers,
   g. Customer comment features (i.e., on-line survey tool),
   h. Real-time transit departure times (This feature resides on the MY 511 servers but is framed by the transit.511.org site to ensure a consistent look and feel to all 511 transit web features.)
   i. Real-time Transit Departure Times Hub web pages (These web pages provide departure predictions for routes at a transit hub. The pages are displayed on large monitors at the hubs,)
   j. Usage reporting, and
   k. New features and functions as they are added

4. Maintain, and update as needed, a standard electronic map database and licenses for the map databases to meet the functional requirements defined in *Appendix A-2, Functional Requirements*. Coordinate mapping issues with the MTC GIS Group as needed.

5. Optimize data dissemination through on-going maintenance. Optimization tasks that are considered on-going maintenance shall be identified annually through Task I.A (Project Planning). For year one, tasks include:
   a. Improve user ability to manipulate the traffic map,
   b. Reorganize the display of information on the website (e.g., group the camera list)

6. Facilitate the integration of externally developed applications into 511 core features as directed by MTC (e.g., applications developed by users of the API). Coordinate with the 511 sister web pages to create a “511 Lab” that encourages development of applications using 511 data.

7. Provide general web design services and recommend design changes to improve functionality. Coordinate with other 511 sister websites (i.e. transit, rideshare, bicycling) and the MTC Marketing Contractor to enable functional and design consistency of the 511 websites.
8. Update the website as the 511 style sheet changes. Integrate time-sensitive geographic data into a graphical map display.
9. Implement, manage and support content management services on the website to enable direct MTC editing of content within the Traffic website, MY 511 and Real-Time Transit features..
10. Evaluate and purchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effective performance. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
11. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
12. Manage the website equipment and software inventory
    a. Affix MTC property labels to all purchased equipment.
    b. Affix MTC bar-coded labels to all purchased equipment costing more than $300.
    c. Maintain all equipment and software user manuals.
    d. Maintain and update the project's equipment and software inventory database.
    e. Generate monthly reports from the database showing equipment/software status and maintain these reports in the on-line project management files.
13. As new transit agencies are added and updates to existing agencies' configuration data are made to the Regional Real-time Transit system, add all appropriate data (configuration and predictions) to MY 511, the Departure Times web feature, the Stop ID look-up web page, and if appropriate, the Departure Times Hub web pages.
14. Build and maintain Departure Times Hub web pages. Use the real-time transit hub signage software to display the routes on monitors located at transit hubs and installed and maintained by hub owners. Work with the hub owners on the list of routes to display and on troubleshooting display issues. If necessary, ensure that the software rotates between multiple pages of route predictions.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.A.1 - 2	A 511 traffic website maintained to meet functional requirements and performance standards	Ongoing
IV.A.3	511 traffic and real-time transit website features and functions maintained to meet functional requirements and	Ongoing

	performance standards	
IV.A.4	A 511 traffic map database that is maintained to meet the functional requirements	As needed
IV.A.5a	Optimizations as defined annually	As defined in Annual Work Plans
IV.A.5b	Improved map functionality	March 31, 2010
IV.A.5c	Reorganized website	April 30, 2010
IV.A.6	Report of external groups accessing 511 data	Monthly
IV.A.7	Website design changes; Website design updates per new stylesheets; Website design recommendations	As needed
IV.A.8	Updated website	As needed
IV.A.9	Content management services	Implemented by 12/31/09
IV.A.10	Evaluations of new hardware, software, etc.	Annually
IV.A.11	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.A.12	Equipment/software status reports	Monthly
IV.A.13	Add and maintain transit agency data into the web Departure Times feature and the Stop ID look-up page	Ongoing
IV.A.14	Add and maintain Departure Times Hub web pages to display departure times at transit hubs on monitors.	Ongoing

B. Operate and Maintain the 511 Phone System

1. Provide the 511 telephone service through a number free of charge to callers from landlines and pay telephones anywhere in the nine-county Bay Area and ensure that 511 services are available to all mobile phone users, regardless of carrier.

2. Implement a program of routine, preventative maintenance; troubleshoot and fix system errors (e.g. bad transfers, out-of-date recordings and failures; repair equipment; respond to and recover from hardware and software outages; backup the system data; and archive the backup media to meet the functional requirements of the 511 phone system described in *Appendix A-2, Functional Requirements* and the performance standards described in *Appendix A-3, Performance Standards and Payment Deductions*. Maintain all phone system components in place at the time of

the contract start date (listed in *Appendix A-1, Existing System*) until they are replaced with new components. Operate and maintain new system components.

3. Ensure 511 is available free of charge on all Bay Area pay phones. Negotiate with pay phone companies as needed.
4. Disseminate the following information and maintain the following data dissemination features and functions to meet the functional requirements described in *Appendix A-2, Functional Requirements.*
   a. Traffic conditions
   b. Driving times,
   c. Free transfers to other transportation information (e.g. FasTrak, TransLink, Regional Rideshare Program, regional transit agencies),
   d. MY 511^{SM} (both traffic and real-time transit data)
   e. Phone floodgates,
   f. Real-time transit departure times,
   g. Emergency menus,
   h. Back-up touch tone system,
   i. Survey capability,
   j. Usage reporting,
   k. Comment feature, and
   l. New features and functions as they are added
5. Optimize the phone system through on-going maintenance to improve the customer experience. Optimization tasks that are considered on-going maintenance shall be identified annually through Task I.A (Annual Planning). For year one, this includes:
   a. Research usage of all phone options and recommend whether to streamline, reduce, re-organize, or maintain the current options. Implement any recommended changes.
   b. Improve the call flow "repeat" sequence,
   c. Improve scripts to aid caller navigation,
   d. Avoid repeating hints that a caller has already heard, etc.,
   e. Provide historical data on the phone (possibly),
   f. Implement recommendations for improved phone system stability/capability.
   g. Prepare for and manage recording sessions to update the 511 phone's wav files.
   h. Install and test new recorded wav files in the 511 phone system.
6. Recommend changes to the 511 phone menu structure and static information to improve system usability. Update and change the 511 phone menu structure and static information provided by conducting recording sessions not less than quarterly. Maintain a directory tree of all current system .wav file scripts and names and a searchable database of total .wav files recorded.
7. Coordinate with other 511 modal contracts (i.e., transit, rideshare, bicycling) and the MTC Marketing Contractor, and other MTC operations programs (i.e.FasTrak, TransLink, Freeway Aid) to gather information and develop and implement changes to the phone system (e.g., create recordings, implement menu changes.)

8. Maintain access (i.e., meet ADA-compliance guidelines and policies) to the 511 phone system for people with disabilities. Maintain and test the touch-tone back-up system and the 711 relay service connection to 511 monthly.
9. Evaluate andpurchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effective performance. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
10. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
11. Manage the phone system equipment and software inventory
    a. Affix MTC property labels to all purchased equipment.
    b. Affix MTC bar-coded labels to all purchased equipment costing more than $300.
    c. Maintain all equipment and software user manuals.
    d. Maintain and update the project's equipment and software inventory database.
    e. Generate monthly reports from the database showing equipment/software status and maintain these reports in the online project management files.
12. As new transit agencies are added and updates to existing agencies' configuration data are made to the Regional Real-time Transit system, update the phone Departure Times feature with new recorded wav files and recognitions of routes, directions, stop IDs, and stop names. Also, ensure that all additions and changes flow through the entire user interface, including touchtone options. Ensure that all predictions play back as stipulated in the Real-time Transit User Interface Requirements.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.B.1	A 511 phone system free to landline callers throughout the Bay Area and available to all mobile phone users	Ongoing
IV.B.2	A 511 phone system maintained to meet the functional requirements and performance standards	Ongoing
IV.B.3	Free calls to 511 on all Bay Area pay phones	Ongoing
IV.B.4 a - k	511 data dissemination features that meet the functional requirements	Ongoing
IV.B.5a	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
IV.B.5b	Improved repeat sequence	Once by June 30, 2010
IV.B.5c	Improved caller navigation scripts	Once by June 30, 2010
IV.B.5d	Improved hint scripts	Once by June 30, 2010
IV.B.5e	Historical driving times data	Once by June 30, 2010

IV.B.6	Directory and database of recordings	Update at needed and not less than quarterly
IV.B.7	Phone system recordings	Approximately quarterly
IV.B.8	Reports documenting results of touchtone back-up system and 711 relay service connection	Monthly
IV.B.9	Evaluations of new hardware, software, etc.	Annually
IV.B.10	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.B.11	Equipment/software status reports	Monthly
IV.B.12	Add and maintain the Departure Times phone user interface as transit agencies are added to the Regional Real-time Transit system or make changes to their data in said system.	Ongoing

C. Operate and Maintain the Real-Time Transit Data Collection & Data Processing System

1. Implement a program of routine, preventative maintenance; fix system failures; repair equipment; respond to and recover from hardware and software outages; backup the system data; and archive the backup media. The preventative maintenance program shall ensure that the real-time transit system data collection and data processing components are performing optimally and collecting real-time transit predication and configuration data from transit agencies that have developed or will develop real-time transit feeds (up to 11 agencies). The program must meet the functional requirements described in *Appendix A-2, Functional Requirements*. Maintain all real-time transit system components in place at the time of the contract start date (listed in *Appendix A-1, Existing System*) until they are replaced with new components. Operate and maintain new system components.
2. Work with transit agencies (up to 10 bus/rail agencies and 5 ferry services) as directed by MTC to coordinate the integration of the real-time transit system and to provide data feeds to the Regional Real-time Transit System. This shall include a range of specific details, such as working with the transit agencies to improve data transfer requirements for both Java Messaging System (JMS) and web services definitions, if necessary.
3. Work with transit agencies to ensure changes to their configuration data are identified, verified, and updated in the real-time transit system per the functional requirements listed in *Appendix A-2, Functional Requirements.*

4. Evaluate and purchase new hardware, software and communications equipment/licenses to replace systems and equipment as they near the end of their life cycles so the system uses up-to-date software, operating systems, hardware, etc. to provide optimal and cost-effective performance. The purchase schedule shall be based on *Appendix B, System Replacement Needs* as revised by the Contractor in Task I.A.1 and programmed in Task I.A.5.
5. Install equipment and prepare test procedures (scripts), test and configure equipment to demonstrate that the equipment meets the functional requirements.
6. Acceptance test the Java Messaging System (JMS) application and make enhancements, as needed to ensure a functional application.
7. Optimize data collection and improve data accuracy through on-going performance monitoring and maintenance. Optimization tasks that are considered on-going maintenance shall be identified annually through Task I.A (Annual Planning). Preliminarily identified optimizations include:
    a. Work with MTC staff and transit agencies to determine how best to use the transit agencies' arrived-status data.
8. Work with MTC's 511 Transit Contractor to bring transit configuration data via the RTD Data Extraction Tool into the Regional Real-Time Transit system. Maintain the tool and enhance, if needed.
9. Develop and implement a Quality Assurance/Quality Control (QA/QC) Strategy for the static configuration and real-time transit prediction data to ensure the data is up-to-date and accurate. As new configuration data is uploaded to the system and compared to existing configuration data, manually check and revise data as required by the system to meet the QA/QC and accuracy requirements.
10. Run system logs, interpret system logs, and provide ideas for improving the performance monitoring plan to support third-party performance monitoring that will:
    - Test data consistency between the regional real-time transit system and 511, transit.511.org, and the network of regional real-time signs at transit hubs.
    - Test that data transfer times from the transit agencies' into the real-time system and out to through the real-time dissemination features are meeting the functional requirements.
    - Test the data accuracy of the regional system's real-time transit predictions from the perspective of phone, web, and hub sign users.
11. Per the functional requirements described in *Appendix A-2*, provide a data feed to disseminate all real-time transit prediction data from the Regional Realt-time Transit system to 511 phone, 511 web, to interested public transit agencies, to the regional transit hub displays, and others as directed by MTC.
12. Comply with the Regional Real-Time Transit Data Sharing and Storage Policy available at http://www.mtc.ca.gov/jobs/
13. Maintain an on-line or disk archive of historical real-time transit data per the Regional Real-time Transit System Requirements.

14. Attend, participate in, and prepare appropriate materials for monthly Real-Time Transit Technical Advisory Committee (TAC) meetings as directed by MTC.

Deliverables

Task/Subtask	Deliverable	Frequency
IV.C.1	A real-time transit data collection system maintained to meet functional requirements and performance standards	Ongoing
IV.C.2	Inclusion of up to 11 transit agencies in real-time program	By June 2011
IV.C.3	A configuration data set that meets functional requirements	Ongoing
IV.C.4	Evaluations of new hardware, software, etc.	Annually
IV.C.5	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.C.6	JMS Acceptance Test Plan	TBD
IV.C.7	Optimizations as defined annually, including for year 1: Plan for use of transit arrived-status data	As defined in the Annual Work Plans (Task I.A.5) June 2011
IV.C.8	Optimally functioning RTD Data Extraction Tool	Ongoing
IV.C.9	QA/QC Strategy	Develop by June 30, 2010 Update annually
IV.C.10	System logs and interpretation needed to support performance monitoring	No less than quarterly and no more than monthly
IV.C.11	Real-time transit data feed(s)	Continuous and ongoing
IV.C.12	A real-time system that complies with the Regional Real-Time Transit Data Sharing and Storage Policy	Ongoing
IV.C.13	On-line or disk archive of historical real-time transit data	Ongoing
IV.C.14	Materials for Real-Time Transit Technical Advisory Committee (TAC) meetings	Monthly

V. ENHANCEMENTS

The Contractor shall undertake tasks requiring significant effort (e.g., 50 or more hours of total project time) through task-orders. These task-orders will add or enhance system functions or features, replace existing data sources with different sources, add new or enhanced data sources, use new technology or provide significant upgrades. *Appendix C, Enhancements*, lists some potential enhancements that could be undertaken during the course of the contract period.

Enhancements may be recommended by either MTC or the Contractor through the Strategic Planning and Annual Work Plan tasks, I.A.1 and I.A.5, respectively. The implementation of enhancements will also depend on available budget, as the budget identified for this contract does not include full funding for all Project Project Element V enhancements listed in *Appendix C*. MTC will work with the Contractor to prioritize and approve the most important and cost-effective tasks based upon the Contractor's analysis performed in Task I.A.1. In certain cases, MTC may seek additional funding to implement these tasks.

Following approval, the Contractor will prepare a detailed scope of work, budget and schedule to develop and implement the enhancement. The Contractor shall implement the Scope of Work upon Task Order approval. Scopes of Work for enhancements shall include some or all of following elements depending on the needs of the task and as directed by the MTC Project Manager:

- A Project Plan
- Schedule for design, development, testing, implementation and maintenance
- Systems Engineering Management Plan (SEMP)
- Concept of Operations
- System and Software Requirements and Specifications
- Detailed Definition of Interfaces
- Interface Control Document
- Configuration Management Plan
- Software Design Document
- Design standards and approaches to ensure that features of the new application are accessible and compatible with the 511 sister pages and short and long-term plans for the 511 Website, and MY 511^{SM}
- Approach to address required changes to other system components to accommodate the enhancement
- Any necessary transition plans
- Verification and Validation Plan
- System Acceptance Test Plan
- In-House Prototype Testing
- Field Deployed Testing
- Incremental Testing Results
- Test Report
- Software Configuration Control System Updates

- Maintenance Plan and warranty
- User's Manual
- System Administration Manual

Deliverables

Task/Subtask	Deliverable	Frequency
V	Detailed scope of work, budget and schedule to support task order development.	As needed

VI. NEW CONTRACTOR RESPONSIBILITIES

Project Element VI tasks are not included in the project funding identified in this Request for Proposal. These responsibilities will only be incorporated into the contract through a contract amendment following MTC approval and the successful attainment of additional contract funding.

A. Closed Caption Television

1. Work with Caltrans to increase communications capacity and put additional CCTV traffic camera images on the traffic website.

B. Redundant System

1. Implement a strategy to establish a fully redundant system, including securing the site, purchasing and provisioning the equipment, testing the system, etc.

C. Vehicle Infrastructure Integration (VII)

The National Vehicle Infrastructure Integration (VII) Initiative is a cooperative effort among USDOT, state governments, and the automobile industry to support development of an information infrastructure for ongoing real-time data communications with and among vehicles to enable a number of safety, mobility, and commercial applications. An implemented VII network will enable travelers to access traffic condition and routing information for multiple modes of travel, receive warnings about imminent hazards, and conduct commercial transactions within their vehicles.

MTC is a member of the national VII effort, the VII California effort and the SafeTrip-21 initiative, which is based in California. MTC's traffic contractor provides technical and program management support for several aspects of VII: VII tolling in the Bay Area; establishment of the Bay Area's Service Delivery Node and its connection to the VII national network; backhaul support for the California VII testbed; and, integration of VII data and mobility applications into the 511 system as required.

More information about the VII initiative can be found on RITA's website, http://www.its.dot.gov/itsnews/fact_sheets/vii.htm.

1. Support ongoing operations and management of the VII California test bed.
2. Coordinate with and participate in the VII National Working Group and the VII California Working Group (Caltrans and its contractor(s), auto manufacturers, etc.).

Participate in VII strategic planning and apply national or California-wide decisions and protocols as necessary.

3. Procure, install, and maintain backhaul communications equipment and process data.
4. Develop end user applications related to traveler information and VII (e.g., provide 511 map interface in on-board equipment) as directed by MTC.

D. Multiple Language Assistance

1. Assess options, coordinate with 511 sister pages, and provide recommendations to implement the provision of multiple language assistance on the phone and website. Following MTC approval, implement strategies.

E. Archived Data Planning Tool

1. Provide a tool to use archived 511 data for regional planning, diagnostics and performance monitoring analyses.

F. Comprehensive 511 Comment Management

1. Manage comments received through 511 web and phone services for all 511 services, including traffic, real-time transit, static transit, ridesharing, bicycling and the 511 homepage.

G. Caltrans' Traffic Management Center (TMC).

1. Assume responsibility for select functions currently performed by the Caltrans' Traffic Management Center (TMC). Functions could include managing the Changeable Message Sign (CMS) program and operations and support or supplement TMC staff.

APPENDIX A-1 SYSTEM COMPONENTS TO OPERATE AND MAINTAIN

The following is a list of the existing system components that the Contractor must operate and maintain until such time as they are replaced or retired through enhancements or on-going system upkeep. Definitions of the system components are provided in *Appendix M, Glossary*.

1. Project Management

- System Reliability Database
- Project Equipment and Software Inventory Database
- ProjectSolve website
- Bugzilla Bug-Tracking Software
- System to track subcontracts and other project agreements
- Phone and website usage tracking tools

2. Traffic Data Collection and processing

- TrafficWatch readers
- TrafficWatch communications links
- Caltrans Data Detection Interface (CDDI)
- CDDI Analyzer
- Automatic Link Data Fusion (ALDF)
- Link Data Interpolator (LDI)
- Interface to use Caltrans cameras
- 511 Travel Time server
- 511 Back-end server
- Smart Corridors Interface
- Data Feed to 511 Phone and 511 Website
- CHP CAD Interface
- Dynamic Transit Data Interface
- Enhanced Data Fusion System (EDFS)
    - Local Area Network
    - Communications Links
    - Back-up Power Supplies
    - EDFS software systems
    - EDFS database
    - Wide Area Network
    - Browser-based content management system
    - Break-A-Link Tool

3. Traveler Information Center (TIC)

- TIC office equipment and office assets - forthcoming

4. Emergency Response

- Website Emergency Abbreviated System (EAS)
- Phone Emergency Abbreviated System (EAS) – Regional Disaster
- Phone Emergency Abbreviated System (EAS) – Subregional Disaster

5. Traffic.511.org

- Web Servers
- 511 Back-end Servers
- Voice Interface Servlet
- JMS Servers
- Data Feed to ISPs (TOMS)
- Mapping Software (forthcoming)
- Mapping tools (forthcoming)
- All equipment at AIS - Forthcoming

6. Website Features/Functions

- Driving Times
- MY 511
- Customer comment features
- Detour Driving Times
- Historical Driving Times (Predict-A-Trip)
- Website News Ticker

7. 511 Phone System

- Telephony Servers
- Conversation Servers
- Phone Floodgate (phone only)
- 511 Manager
- Nuance Voice Platform Lite (NVP Lite)

8. Telephone Features/Functions

- Driving Times
- MY 511
- Customer comment features
- Detour Driving Times
- Travel Alert Phone Menu

9. Real-Time Transit Data System

- JMS Server (Prediction data)
- FTP Server (Configuration data)

10. Real-Time sign server

- Real-Time Transit Data Store
- Real-Time Transit Server
- Transit Hub Signage Application
- Web-services data transfer tool (prediction and configuration data)
- Java Messaging System (prediction and configuration data)
- Interface to Real-Time Transit Data Extraction Tools (XML data extraction tools)

11. Backup System

- Forthcoming

APPENDIX A-2 FUNCTIONAL REQUIREMENTS

[Note: Draft. Final functional requirements will be provided in the final RFP.]

1. System Reliability Database (Task I.C)

1. The System Reliability Database shall include:
2. Date, time and duration of failure
3. Record of who reported the failure and who recorded it into the database
4. System, subsystems, and components affected
5. Description of failure
6. Impact of failure on 511 systems
7. Resolution Log.

2. Subcontracts and Project Agreements Database (Task I.D)

The database to track subcontracts and other project agreements shall include:

1. Purpose of the agreement
2. Permits
3. Memoranda of Understanding
4. Letter Agreements
5. Parties to each agreement
6. Parties' contact information
7. Beginning and end dates of agreement
8. Costs related to the design, build, operations and maintenance of value-generating projects
9. Records of revenue received
10. Reporting capabilities.

3. Website Usage Tracking (Task I.E)

1. IP address and browser shall be used to define a user.
2. IP address and browser and 10 minutes or more between hits in a log file shall be defined as a session.
3. Usage statistics shall be reported on a monthly basis.
4. Web logs that are used to generate usage statistics shall be archived on a daily basis.

4. Equipment and Software Inventory Database (Tasks II.A.14, IV.A.14, and IV.B.13)

The equipment and software inventory database shall include:

1. Equipment/software description,
2. Manufacturer's serial number,
3. MTC equipment label number,
4. Purchase price
5. Date of purchase,
6. Expected Mean Time Between Failures,
7. Date of retirement if applicable,
8. Location of equipment/software,
9. Configuration control process used for software either developed or modified by

Contractor,
10. Software license information, license number, expiration dates and usage restrictions
11. MTC's rights in all software,
12. Warranty information,
13. Warranty expiration date,
14. Vendor contact information,
15. Reporting capabilities

5. Traffic Data Collection (Task II.A)

1. The Contractor shall collect traffic status, in the form of either traffic speed or travel time.
2. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent. Traffic Watch will generate speed and travel time data in kilometers per hour (kph) in whole values, which conforms to the NTCIP Center-to-Center standard for data exchange.
3. Travel time must be provided in one (1) minute increments and provided over roadways listed below.
4. The data collection system and/or any individual element of the data collection system shall have a mean time between failures of not less than 1200 continuous hours.
5. When a failure occurs, the mean time to repair shall be not greater than 4 hours. Repair time is the time between the occurrence of an error and the correction of the error.
6. Respond within 2 hours of notification by MTC to an event and have physical access to system equipment located at the AIS hosting facility in San Diego.
7. Monitor the TrafficWatch readers on a daily basis using the 511 system administrator's daily reports.
8. Within 7 days of a Traffic Watch reader not transmitting more than 75% of the time between 6 am and 10pm, Contractor is to conduct an on-site assessment of the reader.
9. Sufficient replacement parts for the Traffic Watch system should be kept in supply such that repairs can be made immediately following the on-site assessment.
10. If the reason the reader is not functioning is attributable to the Caltrans power supply, then Contractor is to notify Caltrans via email within 24 hours and will follow-up with Caltrans on a 3 day interval.
11. Monitor purchased traffic data on a daily basis using the 511 system administrator's daily reports.
12. If more than 3% of purchased traffic data sources are shown to be non-functional, Contractor should contact the data provider via email within 24 hours.

6. Enhanced Data Fusion System (EDFS) (Tasks II.B and II.C)

1. Data input by the TIC personnel shall become part of the data fusion database.
2. Agency Web application will collect event data from authorized agency users.
3. A Login function will be provided to verify user information (access and functional privileges).
4. Users with Submit privileges will be able to submit new events (for any of the 6 event types) for TIC confirmation and submit suggested modifications (e.g., schedule updates, event closures) and automatically or manually plot this information on the Agency Web map.

5. Users with view-only privileges will be able to view all the above event information, including event statuses for their own organization, but not be able to submit new events or suggest modifications.
6. Agency Web information entered by agency users displays on the TIC Data Fusion Workstation for confirmation by the TIC operators. TIC operators are able to review and confirm Agency Web Events, which updates data displayed in the Agency Web application.
7. The Agency Web application will provide highway and transit operations, planning departments and law enforcement agencies access to the region's current multi- modal transportation data.
8. Any authorized user (authorized by MTC and the TIC) will be able to access the Agency Web application and monitor highway and transit incident, construction, special event information in various event views (tabs) and view information on the Agency Web map.
9. In addition to being able to view unconfirmed events created by authorized agency users for an organization, these agencies will also be able to view event information such as new events that were "confirmed" by the TIC and modifications made by the TIC via agency suggestions for modifications (e.g., event description changes, schedule changes, closures, etc.).
10. Any authorized user can monitor traffic flow by viewing link speeds for certain roadways, which are graphically represented and updated on the Agency Web Map Interface.
11. The Data Fusion Server shall store the previous calendar year's worth of multi-modal data (e.g., roadway and transit incidents, construction activities).
12. The database is appropriately sized to accommodate this storage.
13. Multi-modal data from previous calendar years shall be archived and stored on offline media.
14. Event data from previous calendar years will be removed periodically from two online EDFS databases:
    a. Previous year data in the local "db_TI_TIC_Event_LocalArchive" will be deleted.
    b. Previous year data in the master "db_TI_EventHistory_Archive" database will be archived onto offline media.
15. The Enhanced Data Fusion System will be capable of accepting data from new data sources (accepts other DI – Data Interfaces that meet standards referenced in the Design, (e.g., Data Interfaces) that conform to architecture standards).
16. The Enhanced Data Fusion System must allow data to be fused within one minute after an operator manually enters the data.
17. The Enhanced Data Fusion System will allow data to be fused within one minute once an automated feed is received.
18. The Enhanced Data Fusion System shall fuse data so that all information includes accurate descriptions.
19. The design of the Enhanced Data Fusion System will incorporate sufficient redundancy in order to provide reliable information to the users.
20. The Enhanced Data Fusion System shall fuse data continuously to support the 24x7 operation of the TIC, Data Collection (manual), and Data Dissemination.
    a. Staffed to support 24x7 operations, manual collection of info, monitoring server redundancy.

   b. Redundant servers are to take over when the primary server is down (e.g., for routine maintenance) to support 24x7 operations.
21. The Enhanced Data Fusion System shall have a mean time to repair a failure of less than 2 hours, measured from occurrence of the failure to correction of the failure.
22. Respond within 2 hours of notification by MTC to an event and have physical access to system equipment located at the AIS hosting facility in San Diego.
23. The Enhanced Data Fusion System will retain enough information from the original data sources so that the information disseminated is useful.
24. Data entered in Event OI (Fusion part) is distributed to the TransView database for dissemination. What gets disseminated are basic portions of that event data - enough detail to describe the event (e.g., description) and distinguish the event from others (ID).
25. The Enhanced Data Fusion System shall use ITS standard formats for data. The contractor shall provide details about how the ITS standards are being used.
26. All existing interfaces into the TransView system shall be used. (Unless the MTC project manager specifically grants an exception).
27. The Enhanced Data Fusion System must be flexible and scalable (accepts other DI – Data Interfaces that meet standards referenced in the Design), (e.g., Data Interfaces) that conform to architecture standards).
28. The Enhanced Data Fusion System will be scalable to allow additional Dissemination outputs. For example, allow additional DIs (Data Interfaces) that conform to architecture standards.
29. The Enhanced Data Fusion System will be scalable to allow additional Dissemination outputs.
30. TransView Data can be observed after events are entered and confirmed in the Enhanced Data Fusion System, then processed by the temporary LDS Data Interface.
31. The Enhanced Data Fusion System shall conform to ITS national architecture standards for a regional system.
32. The Enhanced Data Fusion System shall process data originating from the CHP CAD system (or its replacement).
33. The Contractor shall provide useful information to the users of the fused data in at least the following ways:
    a. Information will be available at a single point.
    b. Information will be integrated into a standard format.
    c. Information will be available for multiple uses, such as traveler information, public sector traffic management, traffic system performance monitoring, and archival needs.
34. The Enhanced Data Fusion System will provide a data fusion system, which combines dynamic and static data into standard formats through automated means. All current data feeds described in the Data Collection Functional Requirements shall be fused. Example - “Automated” (future feeds, e.g., from CHP feed)
35. The Enhanced Data Fusion System will provide a data fusion system, which combines dynamic and static data into standard formats through semi-automated means.
    a. Data will “dynamically and semi-automatically be updated as operators add, update and close events. The resulting updates can be viewed on TIC workstations’ Event OI interface and Map interface. During data entry, the event’s Description is semi-automatically built. Event actions accumulate to track an event’s history. Users are

semi-automatically alerted about Pending events (based on user settings). They are also notified about planned event schedules becoming active. Users can also auto-locate events on the map from Event OI.

b. Static information can be viewed and selected from various pick lists in Event OI. Static objects and layers on the map can be displayed/hidden.
c. The Enhanced Data Fusion System will fuse data in approved standard data formats through manual means.
d. The Enhanced Data Fusion System will fuse data in approved standard data formats through semi-automatic means.

36. Provide a data fusion system, which combines dynamic and static data into standard formats through manual means.
    a. Operators are able to add, update, and close events in the Enhanced Data Fusion System using information from manually collected sources. They can also manually plot events on the Map.
    b. Operators are able to view static objects/layers on the map, and to be able hide and display them as needed. Operators will be able to view static information in Event OI, such as data in pick lists.
37. The Enhanced Data Fusion system shall use the latest available national ITS standards, including but not limited to the following: J2353, J2354, J2369, TMDD, NTCIP and TCIP. The contractor will document and seek approval of the specific ITS standard before any enhancement work is done
38. The contractor shall make every effort to achieve compliance with National Architecture Standards for any new or modified system.
39. The contractor shall propose which additional standards (if any) will be used and to what extent.
40. Operators shall be able to manually enter collected information about slowdown/congestion for incidents that occur along the CHP patrolled segments of the San Francisco Bay Area's Metropolitan Transportation System (MTS) network.
41. Operators shall be able to manually enter collected information about slowdown/congestion for incidents that occur along regional routes outside the nine Bay Area counties affecting traffic to and from the Bay Area region.
42. The 511 Traveler Information Center (TIC) Server will be the data collection point for manual data entry by the TIC operators. Using the operator interfaces for incident, construction and planned events the TIC operators will enter information into the system that is collected from manual sources or non-automated data feeds.
43. Operators will be able to create an event (using the information collected from manual sources) on one workstation, and observe the same event on another TIC workstation, which will prove that data viewed on all workstations is centralized on the TIC Server.
44. The TIC operators shall enhance the detail for automated feeds missing information needed to create a high-value data dissemination environment.
45. The contractor, at its expense, in order to comply with CHP requirements, shall provide for California Department of Justice (CDOJ) and Federal Bureau of Investigation (FBI) background checks for any Operations employee assigned to use the California Highway Patrol Media CAD password-protected website, or with regular access to the TMC or TIC
46. The Enhanced Data Fusion System uses a standard electronic map database, and fused

data to show accurate locations and directionality.
   a. A general review of the NavTech area on the map will be done.
   b. Operators also have the ability to select a “Direction” for events, which will become part of the event Description. The “directionality” (e.g., west bound, east bound, etc.) will be observed for events using the Map Info feature.

47. Access to software applications on TIC workstations will be controlled through a common Logon Security application that will verify users and rights. The System Administrator or users with administrative privilege will be able to manage user accounts. Operators will be able to login and out of the workstation applications and change their password.
48. The EDFS shall have a MTBF greater than 1200 hours. Individual elements shall have a MTBF greater than 1200 hours.
49. TIC operators shall have the ability to select types of delay (e.g., "1 mile delay"), "Accident" as type, and/or enter details to further describe the severity of the impact, e.g., "SIGALERT", in EventOI's "Other" field for Transit events.

7. Automated Link Data Fusion (ALDF) Including the CORBA to Framework (C2F) and Link Data Interpolator (LDI) Components (Tasks II.A and II.B)

1. The Contractor shall collect traffic status, in the form of either traffic speed or travel time. Link status, including speed in kilometers per hour and travel time in seconds, is provided by the ALDF System. Notes: The TMDD standard for link data messages includes other information beyond these fields that is also provided, such as a data origin categorization, and volume and occupancy data.
2. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent. ALDF will generate speed data in kilometers per hour (kph) in whole values, which conforms to the NTCIP Center-to-Center standard for data exchange.
3. Travel time must be provided in one (1) minute increments or less and provided over segments agreed to by MTC. ALDF will generate travel time data in whole values in seconds, which conforms to the NTCIP Center-to-Center standard for data exchange.
4. The Contractor shall collect traffic status, in whatever form it takes, continuously, 24-hours a day, 365 days per year. The Contractor may, however, develop algorithms to simulate accurate traffic status information during periods of low traffic flow. During periods of low traffic flow, the Contractor will supplement live data sources with ‘historical’ and/or interpolated data.
5. Traffic status (speed and travel time) shall be updated at least every ninety seconds and shall have a latency of not more than ninety seconds when it first appears on 511. ALDF shall update traffic status (speed and travel time) at least once every ninety seconds. Additionally, the 90-second latency requirement will be based on the time data is received by ALDF.
6. Provide 100% coverage for traffic speed, travel time and incidents on the following roadways.
   a. San Francisco Oakland Bay Bridge, Golden Gate Bridge, San Mateo Bridge, San Rafael Bridge, Dumbarton Bridge, Carquinez Bridge, Benicia Bridge,
   b. Interstate 80 - San Francisco to Dixon,
   c. Interstate 680 - Fairfield to San Jose,
   d. Interstate 880 - Oakland to San Jose,

e. Interstate 580 - San Rafael to I-205,
f. US-101 - San Benito County line to San Francisco,
g. US-101 - San Francisco to Windsor,
h. Interstate 280 - San Jose to San Francisco,
i. Interstate 505 - I-80 to Winters,
j. Interstate 780 - I-80 to I-680,
k. Interstate 980 - I-880 to I-580,
l. Interstate 238 - I-880 to I-580,
m. Highway 17 - Santa Cruz to I-280,
n. Highway 4 - I-80 to Antioch,
o. Highway 13 - I-580 to Hwy 24,
p. Highway 24 - I-580 to I-680,
q. Highway 37 - US-101 to I-80,
r. Highway 84 - US-101 to Livermore,
s. Highway 85 - Mountain View to San Jose,
t. Highway 237 - Hwy 85 to I-680,
u. Highway 87 - US-101 to Hwy 85,
v. Hwy 92 - I-280 to I-880,
w. Highway 242 - I-680 to Hwy 4
x. Highway 29 - Vallejo to Napa,
y. Richmond Parkway - I-80 to Richmond Bridge,
z. Route 12 - I-80 to Route 29,
aa. Route 1 - Half Moon Bay to I-280,
bb. Route 84 - Livermore (I-580) to I-880,
cc. Route 109 - Hwy. 101 to Route 84,
dd. Willow Road - Hwy. 101 to Route 84,
ee. Route 13 - I-580 to I-24,
ff. 19th Avenue in San Francisco - I-280 to Hwy. 101,
gg. Hwy. 101 (Van Ness/Lombard) in San Francisco - Central Freeway to Route 1,
hh. Hwy 92 from Hwy 1 to I-280.

7. Provide 100% incident coverage on the following roadways for traffic speed, travel time and incidents on the following roadways
   a. Almaden Expressway - McKean to SR 87,
   b. Tully Road - SR 87 to Hwy. 101,
   c. Capital Expressway - Almaden to I-680,
   d. Central Expressway - San Antonio to Trimble,
   e. Lawrence Expressway - Saratoga Ave. to SR 237,
   f. San Tomas Expressway - SR 17 to Highway 101,
   g. Montague Expressway - Highway 101 to I-680,
   h. Foothill Expressway - Page Mill to I-280,
   i. Page Mill/Oregon Expressway - I-280 to Highway 101

8. Caltrans Detector Data Interface (CDDI) Component (CDDI) (Task II.A and II.B)

8. The Contractor shall operate 511 Traffic with, at the least, the existing Caltrans District 4 detector data feeds, where they are still available. CDDI shall collect and process data received from Caltrans detector data feeds as long as these feeds are available.

9. The Contractor shall review and evaluate the Caltrans District 4 detector data feeds to ensure compliance with these Functional Requirements.
10. The Contractor shall not use the Caltrans detector data feeds that do not meet these Functional Requirements. CDDI shall collect & process (e.g., validate) data received from Caltrans detector data feeds when these feeds are provided.
11. The Contractor shall collect traffic status, in the form of either traffic speed or travel time. Note: The TMDD standard for link data messages includes other information beyond these fields that is also provided, such as a data origin categorization, and volume and occupancy data.
12. Traffic speeds must be provided in one (1) mile per hour increments or the metric equivalent. CDDI will generate speed data in kilometers per hour (kph) in whole values, which conforms to the NTCIP Center-to-Center standard for data exchange.
13. The data collection system and/or any individual element of the data collection system shall have a mean time between failures of not less than 1200 continuous hours.
14. When a failure occurs, the mean time to repair shall be not greater than 4 hours. Repair time is the time between the occurrence of an error and the correction of the error.
15. Interfaces with subcontractors and public agencies will collect data every 60 seconds.

9. TravInfo® Open Messaging Service (TOMS) (Task II.B)

1. Automatically collected Dissemination Data shall be updated every minute.
2. Incidents originating from manual entry in Data Fusion will be seen from TOMS within 5 minutes of the event being transmitted.
3. The Contractor is responsible for providing dissemination data in an easy to understand manner. Dissemination information shall include location descriptions sufficient to enable unfamiliar users to understand it and allow them to orient themselves.
4. The Contractor is responsible for developing a general non-proprietary interface that can be used by a variety of partners to access the data. ISPs will use custom applications which incorporates the JMS client (COTS application) to interact with TOMS
5. The Contractor shall make all fused and original data that is not restricted by privacy constraints available to partner agencies via ITS standards-based interfaces.
6. Data dissemination systems shall be available consistently, 24 hours a day, 365 days per year, so that users can rely on 511 for their travel decisions. Consistently shall be defined as meeting the mean time between failure requirements for data dissemination systems.
7. The Contractor shall provide traffic data in methods that are useful to Bay Area travelers.
8. The Contractor shall ensure that the distribution of any Caltrans-generated information shall be in compliance with the statewide policy for traveler information distribution.
9. The Contractor shall disseminate information on major transit incidents over the telephone system and TOMS.
10. The Contractor shall directly disseminate ATIS data to the Bay Area transportation users. TOMS will provide transit data to disseminators and disseminators will provide data to transportation users in or outside the Bay Area.
11. Accurate incident and event descriptions shall be reported to the ISPs via the TOMS feed.
12. The enhanced data dissemination system shall meet the accuracy requirements defined for the basic data dissemination system. TOMS will output link and event data that is consistent with the data received from the originating source.
13. The data dissemination system shall have a mean time between failures of not less than

1200 continuous hours.

14. When a failure occurs, the mean time to repair shall be not greater than 4 hours. Repair time is the time between the occurrence of an error and the correction of the error.
15. Transportation condition information shall include 95% of the available data inputs.

10. Manual Data Operations (Task II.C)

1. TIC operators shall collect incident information 24-hours per day, 7 days a week, 365 days per year.
2. TIC operators shall collect detailed incident and slowdown information along the CHP patrolled segments of the San Francisco Bay Area's Metropolitan Transportation System (MTS) network.
3. TIC operators shall collect incident and congestion information on regional routes outside the nine Bay Area counties affecting traffic to and from the Bay Area region from appropriate sources.
4. TIC operators shall
   a. Collect transportation information regarding planned events, construction activities, scheduled delays, lane closures, and locations and times of major event venues as often as necessary for the nine Bay Area counties from all available sources including Caltrans, local public agencies, major event organizers, sport organizations, etc.
   b. Manually enter the above Construction and Special Event information in the Enhanced Data Fusion System.
5. TIC operators shall collect information on major incidents from transit operators.
6. During periods of natural disasters, TIC operators shall collect disaster related information available from regional emergency management centers, Caltrans, CHP, and MTC.
7. TIC operators shall update transportation conditions and events as they change and on a daily basis.
8. TIC operators shall post incident data within one (1) minute of verification of the incident. The verification process must be completed within five (5) minutes of the first received report of the incident 90% of the time. Incidents must be updated within three (3) minutes of confirmation of change of status.
9. TIC operators shall Provide accurate freeway and arterial names, interchange or cross street names, and direction of travel when disseminating incident information 98% of dissemination instances.
10. TIC operators shall provide traffic incident information that is the same as the CHP CAD output.
11. Manually collected Data Dissemination Data shall be posted, enhanced, and withdrawn within five (5) minutes of changed circumstances.

11. California Highway Patrol Computer Aided Dispatch (CHP CAD) Operations (Task II.C)

1. The Contractor shall operate 511 Traffic with, at the least, the existing incident data that is publicly available on the CHP CAD Web site.
2. The Contractor shall review and evaluate existing incident data that is publicly available on the CHP CAD Web site to ensure compliance with these Functional Requirements.
3. The Contractor shall not use any incident data that is publicly available on the CHP CAD

Web site that does not meet these Functional Requirements.

4. The Contractor shall collect detailed incident information along the CHP patrolled segments of the San Francisco Bay Area's Metropolitan Transportation System (MTS) network.
5. The Contractor shall post incident data within one (1) minute of verification of the incident. The verification process must be completed within five (5) minutes of the first received report of the incident 90% of the time. Incidents must be updated within three (3) minutes of confirmation of change of status. The responsibility for fulfilling this requirement lies with the Operations staff.

12. Emergency Response (Task III.C)

1. Provide a website/applications developer on-site at the TIC within one hour of being notified of an unplanned emergency that causes full or partial activation of the Caltrans or:MTC Emergency Operations Center (EOC)or both EOCs.
2. Provide a project manager on-site at the TIC or MTC offices within 2 hours of being notified of an unplanned emergency that causes full or partial activation of the Caltrans or:MTC Emergency Operations Center (EOC)or both EOCs.
3. Provide an on-site TIC Supervisor within one hour of being notified of an unplanned emergency that causes full or partial activation of the Caltrans or:MTC Emergency Operations Center (EOC)or both EOCs.
4. Provide an on-site System Administrator within one hour of being notified of an unplanned emergency that causes full or partial activation of the Caltrans or:MTC Emergency Operations Center (EOC)or both EOCs.
5. Provide sufficient TIC staff to handle information collection and dissemination during the course of an emergency.
6. Provide an on-site website/applications developer, project manager, TIC Supervisor, and sufficient TIC staff to handle information 24 hours a day for the duration of the emergency.
7. Disseminate transportation information related to the emergency through the 511 system within 20 minutes of when the first TIC staff member becomes aware of the incident.

Data Dissemination – General (Tasks IV.A and IV.B)

1. Data dissemination systems shall be available consistently, 24 hours a day, 365 days per year, so that users can rely on 511 for their travel decisions.
2. The Contractor shall respond within 2 hours of notification by MTC to an event and have physical access to system equipment located at the AIS hosting facility in San Diego.
3. The Contractor shall ensure that distribution of any Caltrans-generated information shall be in compliance with statewide policy for traveler information distribution.
4. The Contractor shall also ensure that the distribution of any FasTrak®-generated information shall be in compliance with 511's Privacy Policy.

13. Traffic Website Network (Task IV.A)

1. The traffic website network shall provide superior performance. Network shall have high bandwidth connection [specify the rate] to the Internet.
2. The traffic website network shall be secure from malicious attacks and unauthorized access. Utilize industry standard firewall and software protection applications.

3. The traffic website network shall be redundant. Internal network shall be redundant to reduce downtime due to internally controlled outages.
4. The traffic website network shall provide automatic monitoring and issue notification. If outages occur, appropriate administrative staff shall be automatically notified in order to limit downtime.
5. Respond within 2 hours of notification by MTC to an event and have physical access to system equipment located at the AIS hosting facility in San Diego.
6. Data loss statistics shall be kept and reported on a monthly basis.

14. Traffic Website Hardware (Task IV.A)

7. Hardware shall be adequately sized (memory, processors, disk space, etc.) to handle estimated demand with minimal impact to users.
8. The traffic website hardware shall be scalable. Hardware shall be specified to allow for future growth with minimal reconfiguration of system.
9. The traffic website hardware shall be redundant. Hardware shall be redundant so if one server goes offline, other server(s) can take the load.
10. The traffic website hardware shall be secure. Hardware specified shall include industry standard security features.

15. Traffic Website Software (Task IV.A)

1. Software patches and upgrades shall be evaluated prior to installation to ensure updates will not adversely affect Traffic Website functionality.

16. Website Hosting (Task IV.A)

2. Maintenance shall only occur between 10pm and 3am (PST).
3. Raw web logs shall be archived on a monthly basis.

17. Website Monitoring (Task IV.A)

1. Website monitoring shall detect dead links and graphics on traffic website pages.
2. Website monitoring shall find wrong links, typographical errors, or pages without content.
3. Website monitoring shall report issues to appropriate people.

18. Website General Policies and Standards (Task IV.A)

1. The traffic website shall ensure that distribution of any Caltrans- and CHP-generated information is in compliance with statewide policy for traveler information distribution.
2. The traffic website shall follow all 511 requirements (i.e. reliable, comprehensive, etc.).
3. The traffic website development shall follow generally accepted coding standards for Web development.
4. So as not to encourage unlawful behavior, the traffic Website shall not show traffic speeds as exceeding speed limits.

19. Website Features Maintenance Standards (Task IV.A)

1. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 1 features within no more than 15 minutes of when contractor becomes aware of the problem. Tier 1 website features include: Traffic Map

2. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 2 phone and website features within no more than 60 minutes of when contractor becomes aware of the problem. Tier 2 website features include: The SF Gate traffic map; All Incidents/Construction/Events web text; Traffic Breaking News web text; Construction New web text ; Driving Times
3. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 3 phone and website features within no more than 60 minutes of problem manifestation, unless the repair requires a system restart. Any system restarts required to get Tier 3 features up and running must be deferred until a regular maintenance window. Tier 3 website features include: All other website features

20. Website 511 Portal Relationship (Task IV.A)

1. The traffic website should utilize the following as designed/developed by the Web Portal team:
   a. style sheets
   b. web design standards
   c. branding
   d. global navigation
   e. navigation flow
   f. design templates and layout
   g. color schemes
2. Utilize "traffic.511.org" as the traffic website domain name.
3. The traffic website shall display links to 511 main portal.

21. Website General User Site Accessibility (Task IV.A)

1. The traffic website shall work on Macintosh and Windows browsers.
2. The traffic website shall be developed to be compatible with various versions of popular web browsers (IE, Netscape, etc.) so that majority of the users are captured. Minimally, develop for Netscape 7.0 and Internet Explorer 5.5. Evaluate browser detection to expand browser support.
3. The traffic site should be designed such that it is usable at a screen resolution of 800x600 and greater.
4. The traffic site should be designed bearing in mind the needs of users with connection speeds of 28800bps and higher. Where possible, pages should be constructed under 50 Kbytes in size (approximately 10 seconds to load on a 56.6 Kbps dial-up modem).
5. The traffic site shall be designed using no plug-ins, unless sanctioned by MTC.
6. The web shall use the standard 216-color palette.

22. Website Section 508 Site Accessibility (Task IV.A)

1. The traffic website design shall meet appropriate conformance levels outlined in the Web Content Accessibility Guidelines 1.0 of the Web Accessibility Initiative (WAI) and the Federal Access Board standards under Section 508 of the Rehabilitation Act of 1998.
2. The traffic website shall use colors that can be distinguished by users with color-blindness.
3. The traffic website shall provide alt tags for relevant images.
4. The traffic website shall provide redundancy in navigation including textual links.

5. The traffic website shall display traffic information to fit one screen size to minimize scrolling.
6. The traffic website shall provide text links that can be discriminated from ordinary text by being underlined and colored differently. Therefore, no underlining on a non-link. This item does not apply to a menu bar as long as the menu bar is located at either the top or upper left and it is set off from the rest of the page by a box, line, or alternative background.
7. If "pop-up" windows are utilized, focus should always be set to new window.
8. The traffic website shall utilize W3C recognized evaluation, repair, or transformation tools such as Crunchy Technologies PageScreamer Spider and Hiawatha Software's AccVerify for Website accessibility.
9. Specialized browsers (screen-readers, adaptive browsers, voice browsers, etc.) shall be utilized to test website's accessibility. If design or development compromises must be made between specialized browsers, use the application with the widest usage as a benchmark. For example, JAWS or WindowEyes (depending on penetration in the Bay Area) should be used as the benchmark screen-reader due to its wide use.
10. The traffic website shall provide information retrieval options (redundancy).

23. Website User Privacy- Cookies (Task IV.A)

11. The traffic website shall only utilize cookies if absolutely necessary (as some users find them intrusive and annoying), and give users significant benefits. Traffic site team shall get approval from client before cookie implementation.
12. If cookies are implemented, an attempt to utilize a "511-wide" shall be thoroughly investigated. In addition, a note regarding the use of cookies shall be included in the Privacy Policy statement.
13. The need for cookies and how they are to be implemented shall depend on the need to store a user's preference information (e.g. data refresh intervals, color preferences, etc.). If cookies are used, they shall be used to enhance collection of user statistics (e.g. need to track a returning visitor to a site).

24. Website Privacy Statement/Policy (Task IV.A)

1. If such standards do not exist one month before the scheduled final launch date for the traffic site, the traffic website shall propose standards regarding:
   a. the use of cookies and what type of information is going to be contained.
   b. what the MTC does with feedback information.
   c. what MTC does with user's emails and email addresses that it receives.
2. If such a statement does not exist one month before the scheduled final launch date for the traffic site, the traffic website shall draft and propose an MTC privacy commitment statement with the following components:
   a. Commitment to Data Security
   b. Describe what types of information is being collected (e.g. cookies, IP addresses, emails and email addresses, toll tag serial numbers, etc.)
   c. Describe what the MTC does with information collected
   d. How does MTC share this information with other parties
   e. Whom does a user contact if they have questions or concerns about the privacy policy
   f. This policy shall need to be approved by MTC's legal department.

3. The Privacy Policy link shall be consistent with the 511.org portal page, and shall be available on every page on the traffic site.

25. Website Data Refreshing (Task IV.A)

4. Data Refreshing shall be applicable to Real-Traffic Views, Traffic Speed, Incident, Road Construction, Estimated Travel Time and Special Event data.
5. Link or button to manually refresh data shall be available.
6. The traffic website shall capture user's refresh interval preferences. It shall provide the ability to set refresh interval (e.g. 2 min, 3 min, 5 min, never, etc.). The traffic website shall display text that details the current refresh interval in proximity to data being refreshed.
7. The traffic website shall ensure refresh interval does not interfere with a user's accessibility limitations. For instance, page does not refresh before a screen-reader is able to read all information. To this end, the default refresh interval shall not be faster than 3 minutes.

26. Website Personalization/Bookmarking (Task IV.A)

1. URLs should contain enough query information so a user can go directly to the information they desire.
2. The website shall not require users to log in.
3. The traffic website shall allow users to cycle through three schemes combining different colors.

27. Website General Content (Task IV.A)

1. The traffic website shall provide a section of “About 511 Traffic” content , as well as a method to manage that content.
2. The traffic website shall provide a section of “Useful Traffic Links”, as well as a method to manage that content.
3. The traffic website shall provide a “Troubleshooting FAQ”. Topics shall be located at the top of page that when selected navigate user to correct question and answer pair, which are located further down on the page. Information shall be ordered logically.
4. The traffic website shall provide a 511 feedback web form and commuter surveys to capture user’s input, and shall transfer feedback to appropriate location for MTC review.

28. Website 511 Traffic Partners (Task IV.A)

1. The traffic website shall display list of partners (CHP, Caltrans, etc) and include a link to their respective homepages if a homepage is available.
2. The traffic website shall provide method to manage 511 Traffic Partner content.
3. When links to partner sites are selected, the traffic website shall spawn a new browser session and switch focus to partner site.

29. Website Contact Information (Task IV.A)

1. Contact information shall be placed in an obvious location in the website.
2. Contact information shall include multiple methods to contact the 511.org representative (e.g. mail, email, phone, etc.)

30. Website Traffic Messages (Task IV.A)

1. Selected number of Traffic Messages (each linked to complete text) shall appear on main Traffic page. Traffic Messages on home page shall be links to detailed information about the specific message.
2. Traffic messages will be input manually by MTC staff or designees. A system to manage this content will be created.
3. Traffic Messages feature page shall have the list of Traffic Messages ordered by start time (descending) and grouped by date of the message.

31. Website Traffic Home Page (Task IV.A)

4. The traffic home page shall provide users with easy access to traffic information. The map and text features shall require not more than one click to access.
5. The home page shall display overview map with current speed information. The home page will allow users to view full-function traffic map by clicking on the overview map.
6. The home page shall display high-priority traffic messages.
7. Data on home page shall be refreshed every five minutes.

32. Website Traffic Maps (Task IV.A)

1. Traffic Map shall use common conventions for the provision of mapped information via the web. The map shall allow the user to zoom, pan, identify icons and turn on / off layers.
2. Traffic maps shall display the following features, if available:
   a. Interstates and expressways
   b. Highways
   c. Major cities.
3. Traffic maps shall display an appropriate amount of detail for different zoom levels. An "appropriate level" is defined as a level which shows enough detail to allow users to orient themselves, but not so much detail as to distract from the essential information being presented.
4. Traffic maps shall clearly display roadways detailed in the Data Dissemination System.
5. Traffic maps shall be to scale, and the scale at any zoom shall be indicated by a scale bar.

33. Website Real-Time Traffic Information Map (Task IV.A)

1. Map legend shall be readily accessible.
2. "Map Navigator" (an overview map showing the location within the Bay Area of the currently-displayed traffic map) shall be included.
3. The traffic website shall display date and time of last refresh for currently displayed real-time traffic information. The traffic website shall display real-time traffic information only if it has been updated within a configurable time period. Otherwise, display no information is available.

34. Website Traffic Speed (Task IV.A)

4. The traffic website's traffic maps shall display current speed for links based on speed range by color-coding the links. The traffic website shall provide different color-coded speed segments, as well as a color-coded legend. Speed shall be separated into 3-4 color-coded segments. The traffic website shall use colors that clearly denote speed ranges

(e.g. Red, Yellow, Green, Black) as well as "No Data". If color codes do not meet accessibility requirements, the traffic website shall provide alternate view or color scheme.
5. The traffic website shall not code traffic speed by weight (thickness).
6. If HOV data is available, the traffic website shall display data separate from or in contrast to information on general-purpose lanes.

35. Website Non-Speed Traffic Information (Task IV.A)

1. The following types of information shall appear on the traffic map as icons:
   a. incidents
   b. special events
   c. construction locations
   d. locations of traffic cameras
2. The traffic website shall use commonly accepted symbols for traffic information, special events, and road construction. These symbols should be taken from a standards manual or, if such does not provide needed symbols, from those used commonly on other current traffic sites.
3. When an icon/link for an incident, special event, construction location, or camera location, relevant information shall appear on the page (e.g. by clicking on an icon/link, the relevant data shall appear in a section on the same page, not a separate window). Information provided is dependent on data from the Data Dissemination Server.
4. For cameras, the “relevant information” is a graphic showing the view from that camera at that time. When displaying traffic images, the traffic website shall create an image frame describing location and detailing timestamp.
5. If image data from provider is unavailable, the traffic website shall display appropriate message.
6. The traffic website shall provide a method to allow user to deduce camera direction and roadway name.
7. The traffic website shall refresh images according to the user’s refresh setting.
8. The traffic website shall ensure that traffic cameras load times are reasonable for visitors with low bandwidth connections. Streaming and motion video will not be utilized.

36. Website Travel Times Information (Task IV.A)

1. Travel times data must accurately and reliably reflect data as reported from Data Dissemination Server.
2. The traffic website shall display pre-defined list of starting and ending points user can select.
3. The traffic website shall display current driving times for highway segments providing this information. List of highway segments shall focus on heavily congested areas.
4. The traffic website shall display most direct route and alternate routes based on user input. Route alternates shall be displayed by roadway name and trip time, which shall be links to expanded roadway detail of all the routes.
5. The traffic website shall provide a graphical display of each route in Estimated Travel Time feature. Include color-coded congestion levels, relevant traffic camera, incident, road construction, and special event icons on the graphical view.
6. The estimated travel times shall summarize driving times in tabular (text) format for the

returned routes for which travel time information is available. The tabular format shall provide the text of the route and the indicating text showing the estimated travel time for the route for which travel time information was available. Information shall be ordered by geographic region, freeway and alphabetical order.

37. Website Traffic Information Text Pages (Task IV.A)

1. All traffic information displayed on maps should be functionally available in text format.
2. The traffic driving times text pages will allow the user to select an origin and destination, and will present a set of alternate routes between those points. The site will allow the user to view traffic speeds on segments of the route and total travel time for the route.
3. The traffic website text pages shall refresh display of incident list and detail, event list and detail, and construction list and detail according to user setting.
4. The traffic website shall display date and time of last update for currently displayed incidents, special events, construction locations, and cameras.
5. The 511 Traffic Information Tables (traffic info summary, incidents, events, and construction) shall allow for ascending and descending sorting of the rows based on each attribute/column contained in the table.

38. Website System Architecture and Specifications (Task IV.A)

1. The traffic site team will provide an Operations Management Plan detailing means for backup/archival.

39. Website Content Management (Task IV.A)

1. Most of the information on the traffic site shall be managed dynamically by the DDS.
2. A method of content management will be provided for elements requiring content management.
3. Managers must be able to readily utilize content management tool.
4. Updating site's content must not cause the traffic website to go down.

40. Website DDS Downtime/Connection Loss (Task IV.A)

1. The traffic website shall monitor last time data was received from DDS.
2. If data has not been received within a predefined interval, the traffic website shall query DDS to get an updated dataset.
3. If DDS does not respond, the traffic website shall update website traffic data with a message stating that no data is available.
4. In case of connection loss, the site manager shall be notified immediately through a script (pager, email, etc.).
5. Connection loss should be managed on the database server, as this is the last point that data can be monitored before data is transmitted to user.

41. Website System Response Monitoring (Task IV.A)

1. System response monitoring shall test and log connectivity to Traffic.511.org and other links/requests to DDS, if necessary on a scheduled basis.
2. System response monitoring shall test and log response time from web server requests on a scheduled basis.
3. System response monitoring shall set threshold levels for notification.

4. System response monitoring shall automatically notify appropriate people if threshold is met.

42. Website Capacity (Task IV.A)

1. The traffic website shall be able to handle up to 1M pageviews/day.
2. The traffic website shall be able to handle up to 10k simultaneous sessions.
3. Load balanced, redundant web servers may be necessary once bandwidth and benchmarking requirements have been established.

43. Website Overview of TOMS Interaction (Task IV.A)

1. The traffic website shall update automatically collected traffic information and have available for publication on the website immediately upon receipt from the TOMS interface.
2. The traffic website shall update manually collected traffic information and have available for publication on the website immediately upon receipt from the TOMS interface.
3. The traffic website shall utilize location descriptions for traffic information as provided by the TOMS interface.
4. The traffic website shall utilize event and incident descriptions as provided by the TOMS interface.
5. The traffic website shall be available consistently, 24 hours a day and 365 days per year.
6. The traffic website shall disseminate and publish data provided by the TOMS interface.
7. Mean time between failures shall not be less than 6000 continuous hours for the traffic website.

44. MY 511 (Task IV.A)

1. My 511 shall support the identification of 1 primary and up to 2 alternate telephone numbers for a user.
2. My511 shall recognize a user even when the ANI is unrecognizable.
3. My 511 users will be able to select any set of trips that is available over the phone for inclusion into My 511.
4. My 511 users will be able to select "from" and "to" stops for the transit arrival times and receive information from multiple routes.
5. My 511 users shall be able to access the Main Menu from a My 511 state.
6. The Contractor shall provide both text information and map views for My 511 user-defined trips.
7. My 511 users will be able to change any of their parameters for their My 511 service.
8. My 511 users will be able to cancel their My 511 service from a configuration page on the web.

45. Historical Driving Times (Predict-A-Trip) (Task IV.A)

1. The historical data application shall provide the ability to select a day of the week and time of day for historical data views in text-based driving times details.

46. 511 Phone Service (Task IV.B)

1. The Contractor shall disseminate multi-modal traveler information over the 511 phone service. Information shall include location descriptions sufficient to enable unfamiliar

users to understand it and allow them to orient themselves.

2. 511 phone service shall be available consistently, 24 hours a day, 365 days per year, so that users can rely on 511 for their travel decisions. The 511 phone service shall support at least 244 simultaneous calls.
3. The Contractor shall produce monthly voice recognition reports to track the quality of the phone service in responding to voice commands. Voice recognition shall consistently be at least 70%. The Contractor shall regularly conduct tuning exercises to further improve recognition of voice commands.
4. The Contractor shall respond within 2 hours of notification by MTC to an event and have physical access to system equipment located at the AIS hosting facility in San Diego.
5. The Contractor shall maintain access to 511 from all landline carriers, cell phone carriers and pay phones in the nine-county Bay Area. The Contractor shall also maintain access through the 817-1717 (TTY: 817-1718) number; Customers who dial 817-1717 will be automatically be re-routed to 511.
6. The Contractor shall maintain a two-tiered main menu, with additional hidden 'shortcut' options available at the main menu.
7. The Contractor shall provide direct connections through the 511 telephone system to:
   a. All Bay Area transit and paratransit operators
   b. Select ridesharing and bicycling services as directed by MTC,
   c. FasTrak® call center,
   d. TransLink® call center,
   e. Freeway Aid call center,
   f. Sacramento 511, and
   g. Others as directed by MTC (e.g., airport information lines, taxi companies).
8. The Contractor shall disseminate key announcements and incident messages via floodgate messages at the beginning of each menu, when appropriate. The Contractor shall also disseminate information on major transit incidents and delays over the 511 system via floodgates.
9. The Contractor shall provide help for callers during the call through a series of automated help prompts at each menu. The help shall provide information on how to use the system, basic principles of the type of information provided by and though the system, and assistance in navigating the menus. The help message will be specific to the caller's current location within the menu. Callers will be able to access the help message by saying 'help' or 'what are my choices?'
10. The Contractor shall ensure that menus are interruptible. The Contractor will also ensure that floodgates can be programmed to be either interruptible or non-interruptible.
11. The Contractor shall ensure that callers can navigate easily throughout the system using standard voice and touch-tone commands, including but not limited to 'cancel,' 'main menu,' 'stop,' 'go back,' 'repeat' and '0,' '*' or '**.'
12. The Contractor shall maintain the regional and sub-regional Emergency Abridged System, which provides an abbreviated/modified menu structure and specific emergency menu choices.
13. The Contractor shall maintain 511's emergency backup menu system, NVP Lite, which includes direct transfers to transit agencies.
14. The Contractor shall maintain the MY 511 phone feature, which recognizes callers based on their pre-registered caller ID and provides driving times and transit departure times for

user-saved trips. The Contractor shall also maintain a method for callers to manually enter their phone numbers to access MY 511 information.

15. The Contractor shall disseminate traffic information through the Traffic Conditions feature. Traffic information shall include accurate event or incident descriptions, including a time stamp, speed range, location, and slowdown extent. Traffic Conditions shall include a maximum of five incidents, not including floodgates, with the option to hear additional incidents.
16. The Contractor shall disseminate driving time predictions through the 511 Driving Times feature, which provides real-time driving times based on a user-selected starting and ending point, including associated incidents and slowdowns.
17. Contractor shall maintain ADA-compliant solutions to ensure access to 511, including access via 711 through a TTY and a touch-tone backup system. Touch-tones menus should be available at every menu when a caller presses zero, and should be ordered in the order which voice prompts are played.
18. At a minimum, report the following:
    a. Number of calls, requests, transfers, ANIs, and results generated on a weekly, monthly, and as-needed basis. These items shall be provided, at a minimum, in the format of existing reports.
    b. Summaries of feedback from users related to the quality of the data, the types of data desired, the usefulness of the data, and any other comments related to 511.
    c. Any other summary data.
    d. The availability of the 511 phone service and features, including up time, down time, reasons for any failures, and any corrective actions that were needed.
19. The Contractor shall disseminate real-time transit information through the 511 Departure Times service, which provides real-time transit departure time estimates based on a user-selected stop ID, or an agency name, route number, and cross streets. Real-time transit data shall be disseminated in accordance with regional real-time transit system documentation from the region’s transit operators, where the data is available.
20. The Contractor shall maintain the customer comment feature on the phone, which is available by pressing 7-7.
21. The Contractor shall maintain the existing automated survey feature available on the phone to obtain customer feedback about the 511 phone system.
22. The Contractor shall conduct recording sessions as needed (i.e. when new features are added or approximately every six months to accommodate system updates). Recordings shall be made by the existing 511 phone voice talent or entirely re-recorded to ensure one consistent voice. The Contractor shall maintain a database and directory of current and archived recordings. Recordings shall be implemented on the 511 phone system in a timely manner after recording sessions (typically no more than two weeks thereafter).
23. The Contractor shall proactively monitor typical and extraordinarily call capacity needs and make recommendations to MTC staff about options for ensuring that the highest possible number of incoming calls reach the 511 system. Recommendations could include implementing the Emergency Abbreviated System phone menu to handle short-term incidents/emergencies or adding capacity if warranted by sustained high call volumes.

47. Phone Features Maintenance (Task IV.B)

a. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 1 features within no more than 15 minutes of when contractor becomes aware of the problem. Tier 1 phone features include: Traffic Conditions.
b. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 2 phone and website features within no more than 60 minutes of when contractor becomes aware of the problem. Tier 2 phone features include: Driving Times; Transit Agency transfers and recorded information; Help; Real-Time Transit Arrival Times
c. Troubleshoot and begin repair of any problem, issues, malfunctions, etc. of Tier 3 phone and website features within no more than 60 minutes of problem manifestation, unless the repair requires a system restart. Any system restarts required to get Tier 3 features up and running must be deferred until a regular maintenance window. Tier 3 phone features include: All other Phone features.

48. Real-Time Transit General Requirements (Task IV.C)

1. The system shall be based on an open architecture including standardized interface definitions and communications protocols.
2. The system shall not need any special or proprietary algorithms for the exchange, interpretation and dissemination of prediction and configuration data at the interface points.
3. The system shall be able to operate unattended 24 hours a day, seven days a week.
4. The system shall include provisions for adding in levels of redundancy including server and database failover methods and processes.

49. Real-time Transit Data Interface and System Requirements (Task IV.C)

1. The Contractor shall adhere to and maintain the latest versions of the following Real-time Transit system documents:
   a. Regional Real-time Transit System Requirements
   b. Extensible Markup Language (XML) Document Type Definitions (DTDs) for Java Message Service (JMS) Implementation
   c. Extensible Markup Language (XML) Document Type Definitions (DTDs) for Web Services Implementation
   d. Software Functional Requirements Specification Document – Regional Real-time Transit Hub Signs
   e. 511 Real-Time Transit User Interface Requirements
   f. Regional Real-time Transit System Roles and Responsibilities
2. The system shall not collect or publish data from transit agencies not supported by this contract. At the discretion of MTC, any source prediction data received from a supported agency that does not meet performance monitoring criterion shall not be published to all 511 dissemination services.
3. Prediction and configuration data will only be collected and published for those transit agencies defined as “Active”.
4. The Contractor shall perform automated and manual quality control and quality assurance checks on the data received by the transit agencies.
5. The system, including prediction data transfers from all active transit agencies, shall be able to operate unattended and collect data from the transit agencies 24 hours a day, 365

days a year.

6. The Contractor shall work with the transit agencies during any sign ups to incorporate any changes to configuration data. The updates should begin at least two weeks before a transit agency's sign-up or software change goes live to the pubic to ensure that new configuration data is ready for implementation on 511 a minimum of 48 hours prior to the changes going live by the agency.
7. The system shall report and log all errors and alarm notifications.
8. The Contractor shall work directly with the transit agencies or their designated representatives to troubleshoot data transfer procedural and technical problems and data inaccuracies.
9. The Real-Time Transit Data Collection System shall collect the following data
   a. Prediction data with a flag for either departure or arrival data,
   b. Configuration data, such as agency name, route name, route direction, stop/station name, stop ID
   c. Arrival status of vehicle, and
   d. Other data as needed to support expanded functionality (e.g., schedule data).
10. Real-time transit departure times shall be updated at least every one (1) minute.
11. Real-time transit departure times shall be disseminated on regional hub displays using a web page designated for each hub.
12. Do not disseminate real-time information for either an entire transit agency's real-time data set or the data related to selected routes if MTC and its performance monitor deem the data quality to be consistently inaccurate.
13. Collect data in compliance with the region's real-time transit system architecture, requirements and data sharing and storage policy.
14. Provide log files and their interpretation on a regular schedule, not more than monthly or less than quarterly, to MTC and its performance monitor to support performance monitoring efforts.
15. When needed, provide support to MTC at Real-time Transit Technical Advisory Committee (TAC) meetings.
16. Upon MTC direction, the Contractor will add new transit agencies to the regional system and update all related systems accordingly (e.g. 511 phone, 511.org, MY 511, transit hub signage).
17. Maintain and enhance, if directed, the data feed from the Regional Real-time Transit system to 511's real-time transit web features.

50. Real-Time Transit Prediction Requirements (Task IV.C)

1. The system shall collect and publish the next four predictions per route/direction/stop combination for departure times of not more than 90 minutes.
2. The 511 system shall update any and all prediction data that is received from each of the transit agency systems within five (5) seconds of receipt of the prediction data.
3. Valid predictions (those that have already been filtered by the transit agency) for existing stops shall be sent on for dissemination to 511 users or to other transit agencies if subscribed for.
4. New predictions for an existing stop received from the transit agencies that have not changed from a previous prediction shall be filtered out and not sent to for dissemination to the 511 users. However, the updates to the timestamp of the prediction shall be

updated for dissemination to 511 users or to other transit agencies if subscribed for.

5. If a stop does not have a prediction, it shall be checked against the current list of stops that have predictions. If it is an existing stop, the updated times shall be changed. If the stop is new, it shall be marked as a new and inactive stop and a flag shall be sent to the configuration processor and the event shall be logged.
6. The system shall check new predictions against current predictions. If the difference between the two predictions is one minute or longer, the new prediction shall replace the current prediction. If not, the current prediction shall remain and the new prediction discarded. All new predictions shall be truncated off to the minute before comparing with the current prediction.
7. All predictions with Stop IDs, Route IDs and Route Direction that are not recognized (in the configuration database) shall be filtered out and not sent for dissemination to the 511 user or to other transit agencies. All filtered out predictions shall be logged.
8. All predictions that have times in the past shall be filtered out and not sent for dissemination to the 511 users or to other transit agencies.
9. The 511 system shall support response times of no longer than two (2) seconds for requests from 511 users and 511.org users for real-time prediction information

51. Real-Time Transit Configuration Data Requirements (Task IV.C)

1. The 511 System shall perform quality control checks on the stop names and stop IDs provided by the transit agencies. The quality checks shall compare the existing and new set of stop names and stop IDs and identify any changes or differences. Any changes or differences shall be logged (see L-003).
2. A new set of stop names and stop IDs shall be verified such that each stop name has an associated stop ID and that there are no duplicate stop IDs from an agency.
3. For agencies using the RTD data extraction tool, the 511 real-time transit system shall have a ftp server to gather those agencies' configuration data, including test and official releases.

52. Real-Time Transit Logging Requirements (Task IV.C)

1. The 511 system shall continuously and automatically monitor and log all prediction data that is published by the transit agency systems. This log of predictions shall be kept for a minimum of one week and shall be able to be generated and printed within that time frame. All logged events shall include date and timestamps.
2. The 511 system shall continuously and automatically monitor and log all error notifications that are published to the system administrator. This log of error notifications shall be kept for a minimum of one month. All logged events shall include date and timestamps.
3. The system shall automatically and manually generate reports of any and all changes to each transit agency's configuration data. All logged events shall include date and timestamps.
4. The 511 system shall generate a notification and log the event automatically when a change in a transit agency's configuration data is identified. All logged events shall include date and timestamps.
5. The system shall be able to store log files of the predictions, on an ad-hoc basis, into a format which can be entered into a database and stored in a computer that is not

accessible via the Internet. The log files shall be deleted after a configurable period of time. The specific data to be captured during the logging shall include:

- Agency name;
- Time of day;
- Prediction (sent from agency);
- Route;
- Stop code;
- Status field designating whether the 511 System registered a new prediction as either changed or unchanged since the last prediction received.

The data shall be captured after it has been categorized by the 511 System.

53. Real-Time Transit System Administrator Notification & Response Requirements (Task IV.C)

1. The 511 system shall send an e-mail to the system administrator and log the events within five (5) seconds upon identification of an error in messages or communications. All logged events shall include date and timestamps.
2. With publish/subscribe, an e-mail shall be sent to the system administrator and the event logged if no data is received by all transit agencies for a period of five (5) minutes. All logged events shall include date and timestamps.
3. With publish/subscribe, an e-mail shall be sent to the system administrator and logged if no data is received by at least one transit agency for more than fifteen (15) minutes. All logged events shall include date and timestamps.
4. With publish/subscribe, an e-mail shall be sent to the system administrator and logged if an updated prediction for a stop is not received for more than 60 minutes. All logged events shall include date and timestamps.
5. With request/reply, an e-mail shall be sent to the system administrator and logged if an updated prediction for a stop is not received for more than 60 minutes. All logged events shall include date and timestamps.
6. With request/reply, the 511 system shall send an e-mail to the system administrator automatically and log the event when requested prediction data from a transit agency is not available after a user-configurable number of request attempts. All logged events shall include date and timestamps.
7. With request/reply, the 511 system shall send an e-mail to the system administrator automatically when requested configuration data from a transit agency is not available after a user-configurable number of attempts. All logged events shall include date and timestamps.
8. With request/reply, the 511 system shall send an e-mail to the system administrator automatically when requested arrived status data from a transit agency is not available after a user-configurable number of attempts. All logged events shall include date and timestamps.

54. Real-Time Transit Announcement Requirements (Task IV.C)

1. An announcement shall be presented to 511 users if no prediction data is available for a specific stop. This announcement shall be presented when the user specifically requests

prediction data for a specific stop.

55. Real-Time Transit System Backup and Archiving Requirements (Task IV.C)

1. The system shall have data archiving capabilities.
2. Nightly backups of the databases for the 511 real-time transit information system shall be performed.
3. The nightly backups shall be done for the configuration data, arrived status data and all logs, errors and notifications for each night and kept for 90 calendar days at a minimum.
4. For prediction data, the nightly backups shall be kept for 14 calendar days at a minimum.

56. Real-Time Transit Expansion Requirements (Task IV.C)

1. The system shall be designed such that the system can be expanded to include all the Bay Area transit agencies and all their routes, stops and fleets plus an additional 30% demand.
2. The system shall be designed such that the system can be expanded to include the collection of data for continuous real-time reporting of transit vehicle position.

57. Real-Time Transit Hub Sign Requirements

1. Regional real-time transit signs will provide, at a minimum, the following content: a) Agency name or icon, b) Route code, c) Route name with direction, and d) Estimated departure time
2. Page alternation will be used to display content that does not fit on a single page. When displaying multiple pages, the amount of time each page is displayed will be configurable. The bottom of the first page will display “1 of x” with each successive page adding 1 to the first number until the last page displays, “x of x”.
3. Predictions will be listed alphabetically by agency name, then by route name in ascending order with letter-named routes listed before numbers (or if no number or letter exists, alphabetically by route name).
4. Each sign or combination of signs must be capable of showing no more than three predictions per route not to exceed a configurable time limit. If the data feed is only providing one or two predictions per route, the sign will display those predictions.
5. Once the prediction is less than two minutes, the regional sign will display “<2”.
6. Predictions will be shown in whole minutes.
7. If there are no transit service predictions available for a particular route, the sign will read, “No Prediction” for that route.
8. The station name will be displayed in the header of the web page.
9. If the sign web server encounters a technical error processing the page or there is a communications failure between the sign and the database, the sign will display “NO DATA AVAILABLE”. The cause of the failure will be embedded as a hidden field in the sign display for use in debugging. <There should be a notification sent to the administrator of the technical error.>
10. Signs will allow for the keyboard entry of text messages to be displayed instead of the automatic predictions. For messages less than 80 characters, the display font size will be the same as the predictions. If the message is greater than eighty (80) characters but less than 120 characters, the display font size will be reduced to force the message to fit within the space designated for prediction times. Messages greater than 120 characters are not permitted.

11. All regional real-time signs will connect to the Internet to display real-time transit web pages hosted by an MTC web server. The web page residing on the web server will periodically retrieve prediction updates from the system database. The update rate will be adjusted via a configuration parameter.
12. The sign will not display data that has not been updated in the RTT database within a configurable period of time. If no updated data exists for a particular route, the message "No Prediction" will be displayed in place of prediction data.
13. The sign display will emulate as closely as possible, the color schemes of the design in appendix A.
14. The routes and stops that comprise each transit hub will be stored in the real-time transit database.
15. The number of routes displayed per page will be adjustable via a configuration parameter.
16. The footer message displayed at the bottom of the page will be adjusted via a configurable parameter.
17. Database connection parameters will be stored in a configuration file on the web server.
18. The current time will be displayed in the footer of the web page.
19. The 511 logo will be displayed in the header of the web page.
20. The size of the display will be configurable via a cascading style sheet (CSS) file.
21. A tool will be developed to allow operators to enter text messages to be displayed instead of the automatic predictions

APPENDIX A-3 PERFORMANCE STANDARDS AND PAYMENT DEDUCTIONS

Payment reductions will be made to Contractor invoices if system reliability and accuracy of disseminated data does not meet the contract performance standards described below.

I. Phone and Web Availability – The 511 phone and website must be available to the public at least 99.93% of the time (less than 30 minutes per month unavailable). Phone and Web Availability data will be taken from the System Availability Report run monthly. The number of minutes the system is unavailable will be calculated and reported on the Monthly Performance Monitoring Report. Scheduled maintenance windows will not be included in system downtime. All other downtime, regardless of reason, will be included in the calculation.

The selected contractor will maintain the system reliability database and provide the System Availability Report on a monthly basis with the monthly report. MTC 511 staff routinely spot check the reliability database to confirm that entries into the system availability database have been made correctly. The selected contractor will calculate the availability percentage, which will be checked by MTC staff.

Regardless of the reason at its sole discretion, MTC has the right to subtract $20,000 from the Contractor's next invoice for each month that availability falls below this level. Once a penalty is deducted, the Contractor is no longer eligible for this amount.

The Contractor shall submit a memorandum detailing the steps being taken to improve the reliability. This shall be submitted with the monthly invoice. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

II. Data Accuracy – Data disseminated on traffic.511.org, 511 phone, and freeway Changeable Message Signs shall be at least 98% accurate each month. Data accuracy will be calculated by comparing reported driving times and incidents to ground truth and actual observations. The data accuracy value will be an average of all measured values. For example, 99% accuracy of phone data combined with 98% accuracy of web data and 97% accuracy of CMS data results in an overall accuracy of 98%. MTC will calculate data accuracy with the following four tests.

- Test 1: MTC will conduct sample Driving Time runs to compare actual ground travel times against the Driving Times posted on 511 and traffic.511.org. During each sample run, the travel time reported by 511 and traffic.511.org shall be recorded three times: 1) at the beginning, 2) during, and 3) end of each run. The average recorded time is compared to the actual driving time and is defined as accurate if it is within +/- 20 percent. A minimum of 6 runs (three runs plus the corresponding runs in the reverse direction) per month with a minimum distance of 30 miles per run shall be conducted for this calculation. One run will be performed during the morning commute; one run during mid-day; and one run during the afternoon commute, with each of these runs representing

three segments to record. The first segment is from origin to destination, second segment is from origin to some point in between the origin and destination, and the last segment is from this in-between point to the destination. This method will result in a minimum of 18 data points per month to use to measure 511 Driving Times accuracy. Total 511 Driving Times accuracy will be the percentage of data points that are accurate.

- Test 2: MTC will conduct sample measurements during each Driving Times run to compare the number of incidents and traffic slowdowns reported by 511 and traffic.511.org against the actual ground truth, including slowdowns during the drive. If both the performance monitoring run and 511/traffic.511.org report no incidents or slowdowns, the measurement is recorded as accurate.

- Test 3: MTC will: 1) conduct sample observations to compare traffic incidents reported on CHP CAD against incidents reported on 511 and traffic.511.org, 2) compare incident type, direction of travel, route, location (cross-street), and severity (lanes blocked), and 3) determine the percentage of samples where the 511information is accurate, and the percentage of samples where the information was entered into the 511 Data Fusion system within 5 minutes of when the incident was received via the CHP CAD. Overall, accuracy values will be weighted at 40% each for the incident accuracy reported on 511 and traffic.511.org, and 20% for the timeliness of data input. A minimum 20 samples per month are required for this calculation. If the incidents on 511 and traffic.511.org do not match the CHP CAD, Contractor will be given the opportunity to prove that the CHP CAD was inaccurate. If MTC accepts the proof, then the sample will be counted as accurate. If the incidents on 511 and traffic.511.org match the CHP CAD but MTC is able to prove that the CHP CAD is inaccurate and through Standard Operating Procedures (SOP) compliance the TIC operator should not have posted the CHP CAD data, then the sample will be counted as inaccurate.

- Test 4: MTC will conduct post-audits of TIC operator conformance to the SOP during significant incidents. Significant incidents are defined as more than 50% of the lanes on freeways or bay crossings are closed for one hour or more; transit interruptions that result in system-wide closures lasting 30 minutes or more for all Altamont Commuter Express (ACE), BART, Caltrain, and MUNI light rail systems, and major construction events (e.g. Bay Bridge Construction).

For each month that accuracy falls below this level, MTC will subtract $15,000 from the Contractor's next invoice. MTC has the right to reduce payment when the standard is not met, regardless of the reason. It is at MTC's sole discretion to apply the penalty. Once a penalty is deducted, the Contractor is no longer eligible for this amount.

The Contractor shall submit a memorandum detailing the steps being taken to improve data accuracy. This shall be submitted with the monthly invoice. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

III. Voice Response Quality – Voice response quality shall be at least an average of 70% in any given month as determined from the Voice Recognition Report run monthly. The percentage will be reported on the Monthly Performance Monitoring Report.

If the monthly voice recognition report shows a recognition quality between 70% and 75%, the Contractor shall submit a memorandum that details the steps being taken to improve the quality. For each month that voice response quality falls below 70%, MTC will subtract $10,000 from the Contractor's next invoice. MTC has the right to reduce payment when the standard is not met, regardless of the reason. It is at MTC's sole discretion to apply the penalty. Once a penalty is deducted, the Contractor is no longer eligible for this amount.

The Contractor shall submit a memorandum detailing the steps being taken to improve the quality. This shall be submitted with the monthly invoice. The invoice will not be processed until the stated actions have been taken or until MTC is confident that they will be taken.

APPENDIX A-4 PROJECT DELIVERABLES AND APPROVAL PROCESS

The following table summarizes the deliverables listed throughout the Scope of Work.

Task/Subtask	Deliverable	Frequency
I.A.1	Five-year strategic plan	July 31, 2009 March 31, 2010 March 31, 2011 March 31, 2012 March 31, 2013
I.A.2	"Watchlist" of new technology provided in a web-based format (e.g., ProjectSolve) that summarizes each technology, its capabilities, its pros and cons, applicability to the project, etc.	Begin list development 7/1/09 Update list as information about technology becomes available and no less frequently than quarterly.
I.A.3	Web-based list of potential project optimizations and enhancements (e.g., maintain list on ProjectSolve)	Begin list development 7/1/09 Update list as new ideas are generated and no less frequently than quarterly.
I.A.4	Annual strategy planning session	February 1, 2010 February 1, 2011 February 1, 2012 February 1, 2013 February 1, 2014
I.A.5	Annual Work Plan	Annually Final YR1: 7/31/09 Draft YR2: 3/31/10 Final YR2: 5/31/10 Draft YR3: 3/31/11 Final YR3: 5/31/11 Draft YR4: 3/31/12 Final YR4: 5/31/12 Draft YR5: 3/31/13 Final YR5: 5/31/13
I.A.6	Annual Work Plan Status spreadsheet (or other tool)	Tool must be set up by 9/30/09. Update status on a monthly basis.
I.B.1	Monthly Invoices	Monthly within 30 days of the end of the billable month
I.B.2	Monthly Progress Reports	Monthly within 30 days of the end of the billable month
I.B.3	Customer comment auto-response feature	Have up and running by 12/31/09. Provide auto-responses ongoing and

Task/Subtask	Deliverable	Frequency
	Customer Comment Reports	continuously thereafter. Monthly along with Deliverable I.B.2
I.B.4	Value-added services and/or revenue generated on behalf of the project	Based on approved value-added strategy (Task I.A.1)
I.B.5	Local office space	By 9/30/09 and then maintained throughout the contract period.
I.B.6	Staff training on 511 privacy policy	Whenever changes are made to the privacy policy and not less than annually
I.B.7	Bi-annual privacy assessment produced by a third party	3/31/11 3/31/13
I.C.1	Updated, maintained ProjectSolve website	Ongoing
I.C.2	Updated, maintained bug-tracking software	Ongoing
I.C.3	Customer comment management tool	Finalize system by December 31, 2009
I.C.4	Configuration management diary	Finalize tool by June 30, 2010 and provide monthly reports thereafter.
I.C.5	System Availability Report	Monthly – part of monthly progress report
I.D.1	Effective project team	On-going
I.D.2	MTC – Contractor meetings	Bi-weekly
I.D.3	Project oversight committee meeting participation and minutes	Annual strategy meetings per Task I.A.4 Additional meetings as needed
I.D.4	Documents to support MTC's information sharing efforts	As requested by MTC
I.D.5	TIC Tours	Up to ten per year
I.D.6	Marketing support	Approximately once per year
I.D.7	Materials needed for legislative activity support	Rarely – less than once per year
I.D.8	Subcontracts and agreements database report showing pending, current and closed subcontracts and agreements	Provide quarterly
I.D.9	Materials needed for contractual, technical, legal, and administrative management related to maintaining the FCC designation for 511	Rarely – less than once per year
I.E.1	A standard set of comprehensive 511 phone reports. (A sample of the current reports is available at http://www.mtc.ca.gov/jobs/)	Weekly

Task/Subtask	Deliverable	Frequency
	A standard set of comprehensive 511 phone reports. (A sample of the current reports is available at http://www.mtc.ca.gov/jobs/)	Monthly; provided with the monthly progress report
I.E.2	A standard set of comprehensive 511 phone reports. (A screenshot of the website statistic-generation dashboard is available at http://www.mtc.ca.gov/jobs/)	Weekly
I.E.3	Trend Analysis and Conclusions about phone usage and traffic.511.org	Monthly
I.E.4	Statistics and data to facilitate performance monitoring	Monthly
I.F.1	Finalized transition plan	July 1, 2009
I.F.2	Training sessions, documentation, training materials	Up to four times over five years, in the event that a renewable task is not renewed
I.F.3	Documents necessary to develop next procurement	Once; As early as January 2012
I.F.4	Project Transition Plan	Once; As early as January 2012
I.F.5	Successful transition to the next contractor	Once; As early as July 2012 for 4 – 6 months
II.A.1	Traffic data collection system components that meet functional requirements and performance standards	Continuously
II.A.2	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.A.3	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.A.4	Evaluations of new hardware, software, etc.	Annually
II.A.5	Installation of new hardware, software, etc., including test procedures, testing and configuration of equipment to meet functional requirements	Initially as defined in *Appendix B* and as subsequently defined through the updated five-year project plan (Task I.A.1) and Annual Work Plan (Task I.A.5)
II.A.6	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
II.A.6	LDI Analysis	Complete by January 31, 2010
II.A.7	Valid encroachment permit(s).	Ongoing

Task/Subtask	Deliverable	Frequency
II.A.8	Updated and maintained database and map of MTC data collection field sites	As changes occur or biannually
II.A.9	Receipt of equipment delivery Spare part inventory	Upon receipt July 1 each year starting 2010
II.A.10	Identification of data collection trouble-spots and remedies	Monthly
II.A.11	QA/QC strategy	December 31, 2009
II.A.12	511 System Administrator's Daily Reports	Daily
II.A.13	Equipment/software status reports	Monthly
II.B.1	Traffic data processing system components that meet functional requirements and performance standards	Continuously
II.B.2	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.B.3	Traffic data that meets the functional requirements and performance standards	Continuously; Assessed monthly by MTC or third party
II.B.4a	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
II.B.4b	Implement, test and maintain Smart Data Merge algorithm	In approximately five locations by 6/30/10
II.B.5	Evaluations of new hardware, software, etc.	Annually
II.B.6	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
II.B.7	Caltrans Reverse Datafeed available to partner agencies	Continuously and ongoing
II.B.8	511 Traffic data available to the public for development purposes. Third party data feed agreement	Continuously and ongoing Develop template by 9/30/09 Execute as requested by third parties
II.B.9	511 Traffic data feed (TOMS or its functional equivalent) ISP Agreement ISP usage report	Continuously and ongoing Execute as requested by third parties Provide revised template by

Task/Subtask	Deliverable	Frequency
		8/31/09 Include in the monthly progress report (Task I.B.2) no longer than one month in arrears.
II.B.10	On-line or disk archive of historical traffic data	Ongoing
II.B.11	Link and/or trip travel time data	Within 7 days of request
II.C.1	TIC SOPs	Update as needed and not less than annually
II.C.2	Staffed and functioning TIC	Continuously 24/7
II.C.3	511 Operations and Maintenance Manual	Update as needed and not less than annually
II.C.4	Emails to the MTC Project Manager about TIC staff trainings: schedule, agenda, attendance, etc.	At least every six months or whenever changes are made to the TIC SOPs or O & M Manual or whenever staff changes occur (whichever is shorter)
II.C.5	Staffed and functioning TIC located at Caltrans District 4 headquarters	Continuously 24/7
II.C.6	TIC equipment	Continuously 24/7
II.C.7 - 8	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
II.C.9	Meetings with Caltrans and CHP staff	Four to six per year
III.A.1	Attend meetings	One week in advance of planned disruptions
III.A.2	Information and data related to the planned disruption integrated into 511 data and disseminated through the phone and web	As needed
III.A.3	System usage reports related to the planned disruption	As needed
III.B.1	Recommendations regarding system capacity and appropriate redundancies needed to respond to emergencies	Annually; include in annual update to Five-Year Strategic Plan
III.B.2	Emergency response features and functions maintained to meet the functional requirements	Ongoing
III.B.3	Emergency Operating Plan	Annual review and update
III.B.4	Mandatory 8-hour TIC staff training	Annually; Conduct first training by 9/30/09

Task/Subtask	Deliverable	Frequency
III.C.1	Required staffing resources	When an unplanned emergency occurs
III.C.2	Emergency staffing plans	Throughout the course of an unplanned emergency
III.C.3 - 5	Emergency related information disseminated through 511	Throughout the course of an unplanned emergency
III.C.6	Operational system	Throughout the course of an unplanned emergency
III.C.7	Meetings	Throughout the course of an unplanned emergency
III.C.8	Emergency usage reports	During and following an emergency
IV.A.1 - 2	A 511 traffic website maintained to meet functional requirements and performance standards	Ongoing
IV.A.3	511 traffic and real-time transit website features and functions maintained to meet functional requirements and performance standards	Ongoing
IV.A.4	A 511 traffic map database that is maintained to meet the functional requirements	As needed
IV.A.5a	Optimizations as defined annually	As defined in Annual Work Plans
IV.A.5b	Improved map functionality	March 31, 2010
IV.A.5c	Reorganized website	April 30, 2010
IV.A.6	Report of external groups accessing 511 data	Monthly
IV.A.7	Website design changes; Website design updates per new stylesheets; Website design recommendations	As needed
IV.A.8	Updated website	As needed
IV.A.9	Content management services	Implemented by 12/31/09
IV.A.10	Evaluations of new hardware, software, etc.	Annually
IV.A.11	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.A.12	Equipment/software status reports	Monthly
IV.A.13	Add and maintain transit agency data into the web Departure Times feature and the Stop ID look-up page	Ongoing
IV.A.14	Add and maintain Departure Times Hub web pages to display departure times at transit hubs	Ongoing

Task/Subtask	Deliverable	Frequency
	on monitors.	
IV.B.1	A 511 phone system free to landline callers throughout the Bay Area and available to all mobile phone users	Ongoing
IV.B.2	A 511 phone system maintained to meet the functional requirements and performance standards	Ongoing
IV.B.3	Free calls to 511 on all Bay Area pay phones	Ongoing
IV.B.4 a - k	511 data dissemination features that meet the functional requirements	Ongoing
IV.B.5a	Optimizations as defined annually	As defined in the Annual Work Plan (Task I.A.5)
IV.B.5b	Improved repeat sequence	Once by June 30, 2010
IV.B.5c	Improved caller navigation scripts	Once by June 30, 2010
IV.B.5d	Improved hint scripts	Once by June 30, 2010
IV.B.5e	Historical driving times data	Once by June 30, 2010
IV.B.6	Directory and database of recordings	Update at needed and not less than quarterly
IV.B.7	Phone system recordings	Approximately quarterly
IV.B.8	Reports documenting results of touchtone back-up system and 711 relay service connection	Monthly
IV.B.9	Evaluations of new hardware, software, etc.	Annually
IV.B.10	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.B.11	Equipment/software status reports	Monthly
IV.B.12	Add and maintain the Departure Times phone user interface as transit agencies are added to the Regional Real-time Transit system or make changes to their data in said system.	Ongoing
IV.C.1	A real-time transit data collection system maintained to meet functional requirements and performance standards	Ongoing
IV.C.2	Inclusion of up to 11 transit agencies in real-time program	By June 2011
IV.C.3	A configuration data set that meets functional requirements	Ongoing
IV.C.4	Evaluations of new hardware, software, etc.	Annually
IV.C.5	Acceptance Test Plans, System Acceptance Tests and revised system documentation	Initially as defined in *Appendix B* and as

Task/Subtask	Deliverable	Frequency
		subsequently defined through the updated 5-year strategic plan (Task I.A.1) and the Annual Work Plan (Task I.A.5)
IV.C.6	JMS Acceptance Test Plan	TBD
IV.C.7	Optimizations as defined annually, including for year 1: Plan for use of transit arrived-status data	As defined in the Annual Work Plans (Task I.A.5) June 2011
IV.C.8	Optimally functioning RTD Data Extraction Tool	Ongoing
IV.C.9	QA/QC Strategy	Develop by June 30, 2010 Update annually
IV.C.10	System logs and interpretation needed to support performance monitoring	No less than quarterly and no more than monthly
IV.C.11	Real-time transit data feed(s)	Continuous and ongoing
IV.C.12	A real-time system that complies with the Regional Real-Time Transit Data Sharing and Storage Policy	Ongoing
IV.C.13	On-line or disk archive of historical real-time transit data	Ongoing
IV.C.14	Materials for Real-Time Transit Technical Advisory Committee (TAC) meetings	Monthly
V	Detailed scope of work, budget and schedule to support task order development.	As needed

Deliverables Approval Process

MTC approval will be required for the project deliverables listed above. Within 30 calendar days of Contractor's submission of a deliverable, MTC will:

- Approve submittal,
- Approve with comment, or
- Provide comments and request for resubmittal.

For deliverables "approved with comment," the Contractor will address the comments in the next regularly scheduled submittal. If there is no regularly scheduled submittal, Contractor will address the comments and edits in a resubmitted version within 60 calendar days. For those "request for resubmittal," the Contractor will address the comments and edits in a resubmitted version within 30 calendar days.

MTC's designation of deliverable acceptance, and any comments or edits, will be provided to the Contractor in a change-bar or similar version within 30 calendar days of submittal, unless MTC provides the Contractor with notification that the review period for a particular submittal will be extended and stating the time in which it will be completed. In any instance where MTC does

not provide approval, rejection or notification of an extended review period within the 30-day period, the submittal shall be deemed approved. MTC's right to extend the review period is intended to allow flexibility in special circumstances where the nature of the submittal requires more involved review, and not as a diminution of MTC's obligation to promptly review submittals. MTC may also waive the approval process for selected deliverables at MTC's discretion.

APPENDIX B SYSTEM REPLACEMENT NEEDS

[**Note: Draft. Final replacement needs schedule will be provided in final RFP.**]

511 Traffic System Component	Assumptions/Plan	Notes/Issues	Components to be Replaced	Year Initially Installed
Data collection	$1.3m budgeted for Trafficwatch replacements in FY 2010-2012 & FY 2025-27	• On-going maintenance costs are higher than expected. • Need to evaluate cost-effectiveness of TW as compared to SpeedInfo. • Need to monitor introduction of new traffic data collection technology.		
Data fusion (EDFS)	$200K budgeted every five years starting FY 2008/09, but we are deferring this work so that we can see what bidders will propose.	• This system has the most urgent need for replacement/upgrade. • Problems include slow data entry during peaks, cumbersome entry of construction events, & no remote access in emergencies.		
Phone	• $500K for full system replacement budgeted in FY 2012/13 & FY 2022/23 • $160K budgeted every four years starting FY 11/12 for new servers • $300K for enhancements budgeted every three years starting FY 08/09	• Servers were all replaced during migration. • System now uses latest version of Nuance software. • Unclear when full system replacement would be required. This is an issue to explore with Nexus and in the procurement.		
Web	• $100K for new servers budgeted every four years starting in FY 11/12 • $300K for enhancements budgeted every three years starting FY 08/09	• Servers were all replaced during migration (Spring 2008). • Cost of new servers is likely underestimated due to new stacks for emergency capacity, especially if we add web features and usage increases.		
MY 511	• Feature currently incorporated into	• O&M costs included in 511 Traffic		

511 Traffic System Component	Assumptions/Plan	Notes/Issues	Components to be Replaced	Year Initially Installed
	511 phone, but utilizes separate web servers	contract assumptions, not defined separately. • Unclear what the final maintenance need will be once we are in a pure O&M state.		
Real-Time Transit	• $73K for new servers every four years • $336K for system replacements/enhancements based on new technology in FY 2014/15, 2020/21, & 2026/27.	• The RTP budget does not include costs for bd Systems to update and maintain the RTD extraction tool for RT Transit use. Initial costs to develop the tool are estimated at $40K.		

APPENDIX C ENHANCEMENTS

Tasks requiring significant effort (e.g., 50 hours or more of development time) to add or enhance system functions or features, replace existing data sources with different sources, add new or enhanced data sources, use new technology or provide significant upgrades will be undertaken with individual task-orders to plan, develop and implement the enhancements. This appendix lists potential enhancements that could be undertaken during the course of the contract period.

The tasks are organized into three tiers indicating their importance to the project in terms of meeting the goals described in the Request for Project. Tier 1 tasks are the most important and tier 3 tasks are the least important. The tier is not related to the magnitude of effort required for each task.

Tier I

1. Upgrade the EDFS to make it a web-based application, simplify data entry, and provide additional functionality (e.g., ability to track Caltrans construction events, etc.)

2. Upgrade the system's interfaces or develop new interfaces to:
   a. Adapt to changes in the CHP CAD software and/or automate data flow from CAC to the EDFS.
   b. Adapt to changes in the Caltrans District 4 TMC software and/or begin using TMC data (e.g., Lane Closure System data).

3. Improve the data dissemination features and functions to link traffic incidents, construction and events to driving times segments.

4. Design and implement new dissemination methods (e.g., PDAs, cell phones, etc.)

5. Provide new emergency response features when needed

6. Collect and integrate data from new or different data sources provided by other agencies/entities, such as purchased data, probe data, loop detector data, Sensys data, etc.

7. Upgrade the overall traffic webpage.

Tier II

8. Simplify the process of updating links.

9. Develop a more sophisticated phone survey feature to allow for branching, skipping, etc.

10. Upgrade the Predict-A-Trip feature (historical driving times) to provide different average historical driving times based on the users' on-time arrival sensitivity.

11. Collect new types of data provided by other agencies/entities that will expand the system's features and functions. New types of data could include parking data, video, congestion pricing rates, sierra road conditions, HOV vs. mixed flow speeds, planned

construction information, metering lights status, etc. Design and build interfaces and data dissemination features and functions (for both the phone and web) to utilize the new data types.

12. Migrate to a new basemap

13. Provide service in additional languages

14. Develop and implement a comment collection and management system that:
    a. Provides a standard user interface for the 511.org portal page, my511.org, and all modal sister pages,
    b. Provides consistency and uniformity of data gathering, distribution, and archiving,
    c. Automatically populates a database with information from the comment fields;
    d. Timestamps comments
    e. Assigns priority based on the 'subject' field;
    f. Notifies the appropriate MTC staff and/or contractor staff;
    g. Allows MTC or contractor staff to respond from a list of pre-defined responses, write their own response, or forward/reassign the comment;
    h. Archives comments, responses and actions taken;
    i. Indicates the status of each comment
    j. Is fully categorized and searchable
    k. Provides reports (e.g., comments on a particular feature or positive/negative comments).

15. Develop and implement an integrated, customizable, flexible and adaptable phone and web usage tracking system to track the 511 phone system; the complete 511.org website, including 511.org, my511.org, and the suite of modal pages (traffic, transit, rideshare, and bicycling); and e-mail/mobile device communications (e.g., alerts, e-blasts).

16. Create new version of GPS Analyzer tool that does analysis on a link by link basis. This should help identify bad links on trips to ease device elimination.

17. Add data sources to eliminate using the Link Data Interpolator on roadway sections where the Link Data Interpolator (LDI) is used on contiguous links. (See Task II.A.4)

18. Expand data coverage using the existing Data Collection System as prioritized by MTC. Within the Bay Area, this could mean adding data collection equipment. Outside the Bay Area, this would mean integrating data collected from field equipment provided by other regions. If such effort were anticipated to exceed 50 hours of development time in any year, the effort would be scoped under Project Element V and supported with Project Element V budget.

Tier III

19. Contribute to efforts to design and build a standard data interface for communication between 511 systems.

20. Expand data coverage to include arterial data provided by other agencies (e.g., East Bay SMART Corridors project, SFgo, and Silicon Valley Smart Corridor). Design and build interfaces and data dissemination features and functions (for both the phone and web) to use this data.

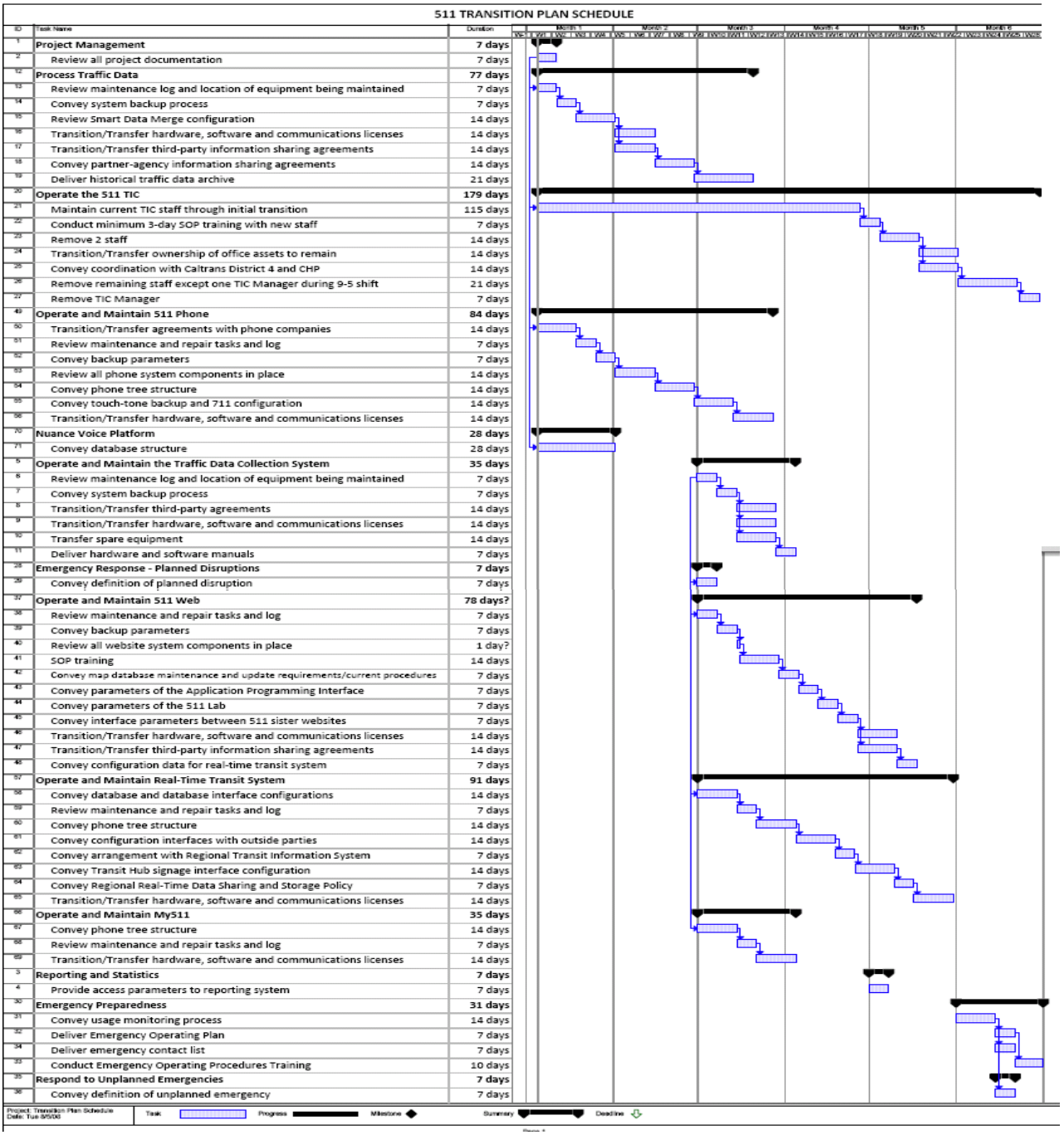
21. Integrate traffic speed and travel time data from routes connecting the Bay Area to neighboring regions: Sacramento/Tahoe, Central Valley, and Santa Cruz

22. Dismantle existing data collection equipment

23. Make TrafficWatch equipment comply with Caltrans' standards.

24. Make 511 phone menus easier to update without the need for system restarts.

APPENDIX D PRELIMINARY TRANSITION PLAN



ID	Task Name	Duration
1	**Project Management**	**7 days**
2	Review all project documentation	7 days
12	**Process Traffic Data**	**77 days**
13	Review maintenance log and location of equipment being maintained	7 days
14	Convey system backup process	7 days
15	Review Smart Data Merge configuration	14 days
16	Transition/Transfer hardware, software and communications licenses	14 days
17	Transition/Transfer third-party information sharing agreements	14 days
18	Convey partner-agency information sharing agreements	14 days
19	Deliver historical traffic data archive	21 days
20	**Operate the 511 TIC**	**179 days**
21	Maintain current TIC staff through initial transition	115 days
22	Conduct minimum 3-day SOP training with new staff	7 days
23	Remove 2 staff	14 days
24	Transition/Transfer ownership of office assets to remain	14 days
25	Convey coordination with Caltrans District 4 and CHP	14 days
26	Remove remaining staff except one TIC Manager during 9-5 shift	21 days
27	Remove TIC Manager	7 days
49	**Operate and Maintain 511 Phone**	**84 days**
50	Transition/Transfer agreements with phone companies	14 days
51	Review maintenance and repair tasks and log	7 days
52	Convey backup parameters	7 days
53	Review all phone system components in place	14 days
54	Convey phone tree structure	14 days
55	Convey touch-tone backup and 711 configuration	14 days
56	Transition/Transfer hardware, software and communications licenses	14 days
70	**Nuance Voice Platform**	**28 days**
71	Convey database structure	28 days
5	**Operate and Maintain the Traffic Data Collection System**	**35 days**
6	Review maintenance log and location of equipment being maintained	7 days
7	Convey system backup process	7 days
8	Transition/Transfer third-party agreements	14 days
9	Transition/Transfer hardware, software and communications licenses	14 days
10	Transfer spare equipment	14 days
11	Deliver hardware and software manuals	7 days
28	**Emergency Response - Planned Disruptions**	**7 days**
29	Convey definition of planned disruption	7 days
37	**Operate and Maintain 511 Web**	**78 days?**
38	Review maintenance and repair tasks and log	7 days
39	Convey backup parameters	7 days
40	Review all website system components in place	1 day?
41	SOP training	14 days
42	Convey map database maintenance and update requirements/current procedures	7 days
43	Convey parameters of the Application Programming Interface	7 days
44	Convey parameters of the 511 Lab	7 days
45	Convey interface parameters between 511 sister websites	7 days
46	Transition/Transfer hardware, software and communications licenses	14 days
47	Transition/Transfer third-party information sharing agreements	14 days
48	Convey configuration data for real-time transit system	7 days
57	**Operate and Maintain Real-Time Transit System**	**91 days**
58	Convey database and database interface configurations	14 days
59	Review maintenance and repair tasks and log	7 days
60	Convey phone tree structure	14 days
61	Convey configuration interfaces with outside parties	14 days
62	Convey arrangement with Regional Transit Information System	7 days
63	Convey Transit Hub signage interface configuration	14 days
64	Convey Regional Real-Time Data Sharing and Storage Policy	7 days
65	Transition/Transfer hardware, software and communications licenses	14 days
66	**Operate and Maintain My511**	**35 days**
67	Convey phone tree structure	14 days
68	Review maintenance and repair tasks and log	7 days
69	Transition/Transfer hardware, software and communications licenses	14 days
3	**Reporting and Statistics**	**7 days**
4	Provide access parameters to reporting system	7 days
30	**Emergency Preparedness**	**31 days**
31	Convey usage monitoring process	14 days
32	Deliver Emergency Operating Plan	7 days
34	Deliver emergency contact list	7 days
33	Conduct Emergency Operating Procedures Training	10 days
35	**Respond to Unplanned Emergencies**	**7 days**
36	Convey definition of unplanned emergency	7 days

APPENDIX E FORMAT FOR PRESENTATION OF PROJECT BUDGET BY YEAR

511 Traffic Contractor
Proposed Budgets by Year for Project Elements I through V (in 1,000s of Nominal $)

		FY09-10	FY10-11	FY11-12	FY12-13	FY13-14	TOTAL
1	*Estimated Revenue*	$4.598	$6.515	$5.769	$5.593	$5.503	$27.978
2	Funds Unbudgeted from Prior Year(s)	$0					
3	Total Estimated Revenue Available	$4.598					$27.978
4	Proposed Budget						$
5	Unbudgeted						$

6	Additional Revenue to be Generated or Value of Value-Added Services	$					

1	Estimated Revenue =	The amount MTC has budgeted for the project for the year.
2	Funds Unbudgeted from Prior Years/Period =	The amount available from prior years as a result of proposing a budget (line 4) that is less than the estimated revenue (line 1) in the previous year(s).
3	Total Available =	Sum of the estimated project revenue (line 1) and any funds not budgeted in prior years (line 2)
4	Proposed Budget =	Your team's proposed budget for the fiscal year
5	Unbudgeted =	Total revenue available for the year (line 3) minus your team's proposed budget for the year. In no year, can this be less than zero.
6	Additional Revenue to be Generated or Value of Value-Added Services=	An estimate of the amount of value generated by the value-added strategies proposed in Task I.A.1 and I.B.4.

Note: This table is provided in Word format on MTC's website at http://www.mtc.ca.gov/jobs/.

APPENDIX F RATE SHEET

Instructions for completing Appendix F: Rate sheet

Note that formulas are not provided in the Excel version of the following table that is available on MTC's website at http://www.mtc.ca.gov/jobs/. Proposers are encouraged to use formulas where appropriate. Please enter the following data:

1. In the pink cell, enter the prime Contractor's name.
2. In the green cell, enter the name of the Project Manager.
3. "Name or position" and "Firm" columns, enter the name of key personnel or the position for non-key personnel and the corresponding firm. There are 15 rows for each fiscal year; additional rows may be added as needed.
4. In the blue cells, enter the salary, overhead, profit and any other costs included in the fully loaded hourly rate in the appropriate column.
5. Under the "Fully loaded hourly rate" column, enter the sum of the previous 4 columns.

APPENDIX F: RATE SHEET

Team:

Project Manager:

Proposed Hourly Rates by Year		Name or position (note 1)	Firm	Salary (hourly rate)	Overhead	Profit	Other (note 2)	Fully loaded hourly rate (note 3)
FY09-10	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
FY10-11	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

Proposed Hourly Rates by Year		Name or position (note 1)	Firm	Salary (hourly rate)	Overhead	Profit	Other (note 2)	Fully loaded hourly rate (note 3)
FY11-12	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
FY12-13	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

FY13-14	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							

Note 1: If staff changes occur, the replacement staff must receive the same or lower salary.
Note 2: Bidders must specifically identify what constitutes any "Other" costs included in this column.
Note 3: Fully loaded hourly rate = Salary + Overhead + Profit + Other

APPENDIX G FORMAT FOR PRESENTATION OF PROJECT BUDGET BY TASK AND DEVELOPMENT OF AVERAGE MONTHLY LUMP SUM PAYMENTS

Proposers must complete the following task-budget tables:

1. Annual Project Budget by Task FY09-10
2. Annual Project Budget by Task FY10-11
3. Annual Project Budget by Task FY11-12
4. Annual Project Budget by Task FY12-13
5. Annual Project Budget by Task FY13-14
6. Summary of Five-Year Project Budget by Task
7. Summary of Costs by Firm
8. Summary of Cost and Resource Allocation FY09-10 to FY13-14

The tables should be completed using the Excel format provided on MTC's website at http://www.mtc.ca.gov/jobs/. Instructions for completing each table are provided in this Appendix and a sample of excel tables follows.

Instructions for Completing Tables 1 through 5, Annual Project Budget by Task

MTC has prepared annual project budget templates in excel format for the proposer to complete. Samples of the tables are provided on the following pages. The templates show the level of detail that should be provided. MTC has not provided formulas in the excel worksheets, but proposers may use formulas to calculate totals.

Detailed Instructions:

1. In the green cells, enter the name and firm of each key personnel. If you have non-key personnel, enter the position name and indicate their firm. Additional columns may be added as needed.
2. In the yellow cells (not shown in sample below, but shown on excel format), enter the fully loaded hourly rate (from Appendix F) of each corresponding personnel or position.
3. In the orange cells, enter the hours by task for each personnel or position.
4. In the "Team Labor Hours" column, sum the hours (orange columns) by task.
5. In the "Team Labor Cost" column, calculate the total labor cost of each task by multiplying the fully loaded hourly rates (yellow cells) by the budgeted hours for each personnel/position and summing.
6. In the blue area, enter the hardware, software, materials, travel and other direct costs by task under the appropriate column.
    a. Include a budget for hardware, software and other equipment based on the proposed System Replacement strategy.
    b. Include any markup you will charge on direct costs in the column "ODC Markup."
7. In the "Team TOTAL COST" column, enter the sum of the previous 6 columns ("total labor cost" to "other").
8. In the white Project Management subtotal row, enter the subtotals for each column.
9. In the lavender "project management effort" rows, enter the proportional amount of the Project Management subtotal that will be applied to each lump sum payment estimate. The sum of the four lavenders rows should equal the Project Management subtotal row.

10. In the light turquoise “Lump Sum” rows, enter the subtotals for each column but the last. In the last column, divide the Team TOTAL COST by twelve (12) to provide the average monthly lump sum estimate.
11. The team TOTAL COST should be provided for the enhancements proposed for implementation in the year.
12. In the last row of Tables 1 through 5, enter the totals of each column for the fiscal year.

Instructions for Completing Table 6: Five-Year Total

1. Add the subtotals from Tables 1 – 5 to show the:
    a. Total hours of each named key staff person for the five-year contract period.
    b. Total team hours and total team labor costs for the five years.
    c. Total direct costs for the five years.
    d. Total five-year cost

Instructions for Completing Table 7: Summary of Costs by Firm

Note that formulas are not provided in the excel worksheet. Please enter the following data into the table:

1. In the orange cells, enter the firm names of the prime and subcontractors. Add rows as necessary.
2. In the light green area, enter the total labor costs by firm for each fiscal year (calculated from the information entered in Tables 1 through 4).
3. In the “Labor subtotal” row, sum the labor costs of the team firms for each fiscal year.
4. In the “Direct costs” row, enter the total direct cost by firm for each fiscal year (calculated from the information entered in Tables 1 through 4).
5. In the last column, “Total,” sum the costs of each row.
6. In the last row, “Total,” sum the costs of each column.

Instructions for Completing Table 8: Summary of Cost and Resource Allocation FY09-10 to FY13-14. Note that formulas are not provided in the excel worksheet. Please enter the following data into this table:

1. In the pink cell, enter the prime Contractor’s name.
2. Enter “Total Labor Hours” as the sum of that task's Team Labor Hours for each fiscal year from Tables 1 through 4.
3. Enter “Total Labor Cost” as the sum of that task's Team Labor Cost for each fiscal year from Tables 1 through 4.
4. Enter “Total Hardware” as the sum of that task's Hardware for each fiscal year from Tables 1 through 4.
5. Enter “Total Software” as the sum of that task's Software for each fiscal year from Tables 1 through 4.
6. Enter “Total Materials” as the sum of that task's Materials for each fiscal year from Tables 1 through 4.
7. Enter “Total Travel” as the sum of that task's Travel for each fiscal year from Tables 1 through 4.
8. Enter “Total Other” as the sum of that task's Other for each fiscal year from Tables 1 through 4.
9. Enter the Project Element subtotals for each column in the appropriate rows.

10. Enter the sum of the previous 7 columns in the “TOTAL COST” column.
11. Enter the total for each column in the last row.

APPENDIX G: PROJECT BUDGET BY TASK Table 1: FY09-10 Team_____

Sample Form: Use Excel Format	Name 1	Name 2	Name 3	Name 4	Name 5	Name 6	Name 7	Name 8	Name 9	Name 10	Name 11	Team Labor Hours	Team Labor Costs	HW & SW (1)	Mater-ials	Travel	ODC Markup	Team TOTAL COST	Avg.Mo Lump Sum
I.A																			
I.B																			
I.C																			
I.D																			
I.E																			
I.F																			
Subtotal Project Mgmt																			
II.A																			
II.B																			
II.C																			
III.A																			
III.B																			
Proj Mgmt Effort																			
Lump Sum A																			
III.C Time & Materials																			
IV.A																			
Proj Mgmt Effort																			
Lump Sum B																			
IV.B																			
Proj Mgmt Effort																			
Lump Sum C																			
IV.C																			
Proj Mgmt Effort																			
Lump Sum Fee D																			
V *enhancement A*																			
V *enhancement B*																			
V *enhancement C*																			
Element V subtotal																			
FY09-10 Subtotal																			

1: Include escrow account costs as applicable.

APPENDIX G: PROJECT BUDGET BY TASK Table 2: FY10-11 Team_____

Sample Form: Use Excel Format	Name 1	Name 2	Name 3	Name 4	Name 5	Name 6	Name 7	Name 8	Name 9	Name 10	Name 11	Team Labor Hours	Team Labor Costs	HW & SW (1)	Mater-ials	Travel	ODC Markup	Team TOTAL COST	Avg.Mo Lump Sum
I.A																			
I.B																			
I.C																			
I.D																			
I.E																			
I.F																			
Subtotal Project Mgmt																			
II.A																			
II.B																			
II.C																			
III.A																			
III.B																			
Proj Mgmt Effort																			
Lump Sum A																			
III.C Time & Materials																			
IV.A																			
Proj Mgmt Effort																			
Lump Sum B																			
IV.B																			
Proj Mgmt Effort																			
Lump Sum C																			
IV.C																			
Proj Mgmt Effort																			
Lump Sum Fee D																			
V *enhancement A*																			
V *enhancement B*																			
V *enhancement C*																			
Element V subtotal																			
FY10-11 Subtotal																			

1: Include escrow account costs as applicable.

APPENDIX G: PROJECT BUDGET BY TASK Table 3: FY11-12 Team_____

Sample Form: Use Excel Format	Name 1	Name 2	Name 3	Name 4	Name 5	Name 6	Name 7	Name 8	Name 9	Name 10	Name 11	Team Labor Hours	Team Labor Costs	HW & SW (1)	Mater-ials	Travel	ODC Markup	Team TOTAL COST	Avg.Mo Lump Sum
I.A																			
I.B																			
I.C																			
I.D																			
I.E																			
I.F																			
Subtotal Project Mgmt																			
II.A																			
II.B																			
II.C																			
III.A																			
III.B																			
Proj Mgmt Effort																			
Lump Sum A																			
III.C Time & Materials																			
IV.A																			
Proj Mgmt Effort																			
Lump Sum B																			
IV.B																			
Proj Mgmt Effort																			
Lump Sum C																			
IV.C																			
Proj Mgmt Effort																			
Lump Sum Fee D																			
V *enhancement A*																			
V *enhancement B*																			
V *enhancement C*																			
Element V subtotal																			
FY11-12 Subtotal																			

1: Include escrow account costs as applicable.

APPENDIX G: PROJECT BUDGET BY TASK Table 4: FY12-13 Team_____

Sample Form: Use Excel Format	Name 1	Name 2	Name 3	Name 4	Name 5	Name 6	Name 7	Name 8	Name 9	Name 10	Name 11	Team Labor Hours	Team Labor Costs	HW & SW (1)	Mater-ials	Travel	ODC Markup	Team TOTAL COST	Avg.Mo Lump Sum
I.A																			
I.B																			
I.C																			
I.D																			
I.E																			
I.F																			
Subtotal Project Mgmt																			
II.A																			
II.B																			
II.C																			
III.A																			
III.B																			
Proj Mgmt Effort																			
Lump Sum A																			
III.C Time & Materials																			
IV.A																			
Proj Mgmt Effort																			
Lump Sum B																			
IV.B																			
Proj Mgmt Effort																			
Lump Sum C																			
IV.C																			
Proj Mgmt Effort																			
Lump Sum Fee D																			
V *enhancement A*																			
V *enhancement B*																			
V *enhancement C*																			
Element V subtotal																			
FY12-13 Subtotal																			

1: Include escrow account costs as applicable.

APPENDIX G: PROJECT BUDGET BY TASK Table 5: FY13-14 Team_____

Sample Form: Use Excel Format	Name 1	Name 2	Name 3	Name 4	Name 5	Name 6	Name 7	Name 8	Name 9	Name 10	Name 11	Team Labor Hours	Team Labor Costs	HW & SW (1)	Mater-ials	Travel	ODC Markup	Team TOTAL COST	Avg.Mo Lump Sum
I.A																			
I.B																			
I.C																			
I.D																			
I.E																			
I.F																			
Subtotal Project Mgmt																			
II.A																			
II.B																			
II.C																			
III.A																			
III.B																			
Proj Mgmt Effort																			
Lump Sum A																			
III.C Time & Materials																			
IV.A																			
Proj Mgmt Effort																			
Lump Sum B																			
IV.B																			
Proj Mgmt Effort																			
Lump Sum C																			
IV.C																			
Proj Mgmt Effort																			
Lump Sum Fee D																			
V *enhancement A*																			
V *enhancement B*																			
V *enhancement C*																			
Element V subtotal																			
FY13-14 Subtotal																			

1: Include escrow account costs as applicable.

APPENDIX G: PROJECT BUDGET BY TASK

Table 7: Summary of Costs by Firm (note 1)

Sample - Use Excel Format						
Firm	**FY09-10**	**FY10-11**	**FY11-12**	**FY12-13**	**FY13-14**	**TOTAL**
Prime						
Sub 1						
Sub 2						
Sub 3						
Sub 4						
Labor subtotal						
Direct costs (note 2)						
Total						

Note 1: This is a summary of total costs for FY 09-10 to FY13-14 and should reflect only the costs included in Tables 1 - 5.
Note 2: Direct costs = Hardware + Software + Materials + Travel & Other Direct Costs

APPENDIX G: PROJECT BUDGET BY TASK
Table 8: Summary of Cost and Resource Allocation F 09-10 to FY13-14
Team:

	FY09-10	FY10-11	FY11-12	FY12-13	FY13-14	TOTAL
Avg. Mo. Lump Sum Payment A (Element I)						NA
Avg. Mo. Lump Sum Payment B (Element II + IIIB)						NA
Task IIIA & IIIC						
Avg. Mo. Lump Sum Payment C (Task IVA)						NA
Avg. Mo. Lump Sum Payment D (Task IVB)						NA
Avg. Mo. Lump Sum Payment E (Task IVC)						NA
Project Element V						

APPENDIX H REQUESTS FOR EXCEPTIONS OR MODIFICATIONS

RFP Section	Relevant Provision	Requested Action
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
	11.	
	12.	

Note: This table is provided in Word format on MTC's website at http://www.mtc.ca.gov/jobs/.

APPENDIX I CALIFORNIA LEVINE ACT STATEMENT

California Government Code § 84308, commonly referred to as the "Levine Act," precludes an officer of a local government agency from participating in the award of a contract if he or she receives any political contributions totaling more than $250 in the 12 months preceding the pendency of the contract award, and for three months following the final decision, from the person or company awarded the contract. This prohibition applies to contributions to the officer, or received by the officer on behalf of any other officer, or on behalf of any candidate for office or on behalf of any committee.

MTC's commissioners include:

Tom Ammiano	Bill Dodd	Jon Rubin
Tom Azumbrado	Dorene M. Giacopini	Bijan Sartipi
Tom Bates	Federal D. Glover	James P. Spering
Vacancy (Sonoma County, cities)	Scott Haggerty	Adrienne J. Tissier
Dave Cortese	Anne W. Halsted	Amy Worth
Dean J. Chu	Steve Kinsey	Ken Yeager
	Sue Lempert	

1. Have you or your company, or any agent on behalf of you or your company, made any political contributions of more than $250 to any MTC commissioner in the 12 months preceding the date of the issuance of this request for qualifications?

   ___ YES ___ NO
   If yes, please identify the commissioner: _____

2. Do you or your company, or any agency on behalf of you or your company, anticipate or plan to make any political contributions of more than $250 to any MTC commissioners in the three months following the award of the contract?

   ___ YES ___ NO
   If yes, please identify the commissioner: _____

Answering yes to either of the two questions above does not preclude MTC from awarding a contract to your firm. It does, however, preclude the identified commissioner(s) from participating in the contract award process for this contract.

_____ _____
DATE (SIGNATURE OF AUTHORIZED OFFICIAL)

_____
(TYPE OR WRITE APPROPRIATE NAME, TITLE)

_____
(TYPE OR WRITE NAME OF COMPANY)

APPENDIX J DEPARTMENT OF TRANSPORTATION REQUIREMENTS

1. Equal Employment Opportunity. Consultant shall not, on the grounds of race, color, sex, age, religion, national origin, ancestry, physical handicap, medical condition, or marital status either discriminate or permit discrimination against any employee or applicant for employment in any manner prohibited by Federal, State or local laws. In the event of Consultant non-compliance, MTC may cancel, terminate or suspend the Agreement in whole or in part. Consultant may also be declared ineligible for further contracts with MTC.

   (In federally-funded contracts over $10,000, the following is required, in addition to the standard EEO clause.) Consultant and its subcontractors shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Consultant and its subcontractors shall post in conspicuous places, available to all employees and applicants for employment, a notice setting forth these provisions.

2. Disadvantaged Business Enterprise (DBE) and Small Business Enterprise Policy.

   2.1. Disadvantaged Business Enterprise (DBE) Participation

   A. This Agreement is subject to 49 CFR, Part 26 entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." Contractor who obtain DBE participation on this contract will assist Caltrans in meeting its federally mandated statewide overall DBE goal.

   B. DBE and other small businesses, as defined in 49 CFR, Part 26 are encouraged to participate in the performance of agreements financed in whole or in part with federal funds. The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR, Part 26 in the award and administration of US DOT- assisted agreements. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the recipient deems appropriate.

   C. Any subcontract entered into as a result of this Agreement shall contain all of the provisions of this section.

   2.2. Performance of DBE Contractors and other DBE Subcontractors/Suppliers

   A. A DBE performs a commercially useful function when it is responsible for execution of the work of the Agreement and is carrying out its responsibilities by actually

performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible with respect to materials and supplies used on the Agreement, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, evaluate the amount of work subcontracted, industry practices; whether the amount the firm is to be paid under the Agreement is commensurate with the work it is actually performing, and other relevant factors.

B. A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, Agreement, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, examine similar transactions, particularly those in which DBEs do not participate.

C. If a DBE does not perform or exercise responsibility for at least thirty percent of the total cost of its Agreement with its own work force, or the DBE subcontracts a greater portion of the work of the Agreement than would be expected on the basis of normal industry practice for the type of work involved, it will be presumed that it is not performing a commercially useful function.

3. Title VI of Civil Rights Act of 1964. Consultant agrees to comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d) and its implementing regulations in 49 CFR Part 21.

4. Debarment. In contracts over $25,000, Consultant is required to certify, prior to executing a contract, that neither it nor its principals have been debarred from certain federal transactions by any Federal agency and to require any subcontractors with subcontracts over $25,000 to provide a similar certification. (A copy of the required certification is included with this Appendix.)

5. Audit and Inspection of Records. Consultant shall permit the authorized representatives of DOT, Federal Transit Administration (FTA) or the Federal Highway Administration (FHWA, and the Comptroller General of the United States to inspect and audit all data and records of the Consultant relating to its performance under this Agreement from the date of this Agreement until three (3) years after the close out of the federal grant from which this Agreement is financed, or five (4) years after the fiscal year of the expenditure, whichever is longer. This requirement must be passed along to subcontractors, excluding purchase orders not exceeding $25,000.

6. Subcontractors

   a. Nothing contained in this Agreement or otherwise, shall create any contractual relation between the MTC and any subcontractors, and no subcontract shall relieve the Contractor of his/her responsibilities and obligations hereunder. The Contractor agrees to be as fully responsible to the MTC for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by any

of them as it is for the acts and omissions of persons directly employed by the Contractor. The Contractor's obligation to pay its subcontractors is an independent obligation from the MTC's obligation to make payments to the Contractor.

b. Any subcontract in excess of $25,000, entered into as a result of this Agreement, shall contain all the provisions stipulated in this Agreement to be applicable to subcontractors.

c. Contractor shall pay its subcontractors within ten (10) calendar days from receipt of each payment made to the Contractor by the MTC.

d. Any substitution of subcontractors must be approved in writing by the MTC's Project Manager in advance of assigning work to a substitute subcontractor.

7. Federal Grant Requirements. Those laws, statutes, ordinances, rules, regulations and procedural requirements which are imposed on MTC as a recipient of federal funds are imposed on Consultant, including compliance with 49 CFR Part 18, FTA Circular 4220.1D and the current FTA Master Agreement, a copy of which is available through MTC.

8. Identification of Documents. All reports and other documents completed as part of this Agreement shall carry the following notation on the front cover or title page:

   The preparation of this report has been financed in part by grants from the Federal Transit Administration, U.S. Department of Transportation. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

9. Rights in Data. The Federal Government reserves a royalty-free, nonexclusive, and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, for Federal Government purposes: (a) the copyright in any work developed under this Agreement; and (b) any rights of copyright to which MTC or Consultant purchases ownership under this Agreement.

10. State Energy Conservation Plan. Consultant shall comply with all mandatory standards and policies relating to energy efficiency that are contained in the State Energy Conservation Plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6321 *et seq*.).

11. Clean Air and Water Pollution Act. Consultant agrees to comply with the applicable requirements of all standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7501 *et seq*.), the Clean Water Act (33 U.S.C. § 1251 *et seq*.), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15).

12. Restrictions on Lobbying. In agreements over $100,000, Consultant is required to execute a certificate indicating that no federal funds will be used to lobby federal officials and to disclose lobbying activities financed with non-federal funds. (Certificate attached.)

APPENDIX J-1 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

(Third Party Contracts and Subcontracts over $25,000)

Instructions for Certification:

1. By signing and submitting this bid or proposal, the prospective lower tier participant is providing the signed certification set out below.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, MTC may pursue available remedies, including suspension and/or debarment.

3. The prospective lower tier participant shall provide immediate written notice to MTC if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "persons," "lower tier covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549 [49 CFR Part 29]. You may contact MTC for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized in writing by MTC .

6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List issued by U.S. General Service Administration.

8. Nothing contained in the foregoing shall be construed to require establishment of system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under Paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to all remedies available to the Federal Government, MTC may pursue available remedies including suspension and/or debarment.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION LOWER TIER COVERED TRANSACTION

(1) The prospective lower tier participant certifies, by submission of this bid or proposal, that neither it nor its "principals" [as defined at 49 CFR Section 29.105(p)] is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) When the prospective lower tier participant is unable to certify to the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Date	(signature of authorized official)
	(type/print name and title)

APPENDIX J-2 CERTIFICATION OF RESTRICTIONS ON LOBBYING

I, _____ hereby certify on behalf of _____ that:
(name and title of grantee official) (name of grantee)

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Executed this _____ day of _____, 2007.

By _____
(signature of authorized official)

_____
(title of authorized official)

APPENDIX J-3

BIDDER’S LIST OF SUBCONTRACTORS (DBE and NON-DBE) - PART I

The bidder shall list all subcontractors (both DBE and non-DBE) in accordance with Section 2-1.054 of the Standard Specifications and per Title 49, Section 26.11 of the Code of Federal Regulations. This listing is required in addition to listing DBE Subcontractors elsewhere in the proposal. **Photocopy this form for additional firms.**

Firm Name/Address/ City, State, ZIP	Phone/ Fax	Annual Gross Receipts	Description of Portion of Work to be Performed	Local Agency Use Only (Certified DBE?)
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*

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BIDDER'S LIST OF SUBCONTRACTORS (DBE and NON-DBE) - PART II

The bidder shall list all subcontractors who provided a quote or bid but were not selected to participate as a subcontractor on this project. This is required for compliance with Title 49, Section 26 of the Code of Federal Regulations. Photocopy this form for additional firms.

Firm Name/Address/ City, State, ZIP	**Phone/ Fax**	**Annual Gross Receipts**	**Description of Portion of Work to be Performed**	**Local Agency Use Only (Certified DBE?)**
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*
Name	*Phone*	☐ < $1 million		☐ YES
		☐ < $5 million		☐ NO
Address		☐ < $10 million		*If YES list DBE #:*
	Fax	☐ < $15 million		
City State ZIP		☐ > $15 million		*Age of Firm (Yrs.)*

Distribution: 1) Original - Local Agency File

APPENDIX K 511 ASSETS FOR VALUE-ADDED SERVICES

This appendix will be completed for the final RFP and will include assets available to facilitate the generation of value-added services. For example, it is envisioned that the 511 home page and 511 Traffic main web page would have space available for the provision of paid advertising or promotion of value added services.

APPENDIX L QUESTIONS FOR INDUSTRY REVIEW AND COMMENT

MTC's goal for this industry review is to gather feedback from potential bidders to develop a final RFP that is clear, generates the largest number of responses possible, solicits responses that can be readily evaluated, provides an accurate understanding of what MTC is asking for, and provides an accurate understanding of the level of effort involved.

We appreciate any, or all, responses to the following list of specific questions as well as any comments you wish to provide. The priority of the question indicates how important a response is to MTC with one being the highest priority and three being the lowest. Please reference the question number in your response.

#	Priority	RFP Section Reference	Questions for Proposers
1.	1	III Form of Proposal	Will the level of detail and magnitude of the proposal effort influence your decision to propose? Please identify, in your opinion, which areas of the RFP demand extraordinary effort from the proposers without adding the appropriate "value" to the evaluation panel to aid in their decision-making. Please identify any suggested modifications.
2.	1	III.I Cost Proposal	Is the level of detail provided in the Scope of Work, coupled with the funding guidance provided in Section II.C and III.I of the RFP, sufficient to allow you to prepare the detailed cost proposals MTC is seeking? What, if any, specific task(s) in the SOW are difficult to put a price on? What, if any, additional funding guidance would assist your proposal?
3.	1	*Appendix A*, *Scope of Work*	Is the scope of work reasonable relative to the project budget? Are there any unreasonable tasks in the scope? What and why? How could they be changed to make them reasonable?
4.	1	*Appendix A*, *Scope of Work*	Does the level of detail provided in each task description give you enough information to understand what we are seeking? Please call out the specific tasks that should provide more detail.
5.	1	II.C.2 & III.J Funding	What are your concerns, if any, about the monthly lump sum fee payment provisions?
6.	1	II.B. Period of Performance	If applicable, would a six-month transition time be sufficient for your firm to set up local operations and transition responsibilities?
7.	1	*Appendix A*, *Scope of Work*	What are your concerns, if any, about managing enhancements through task orders?
8.	1	*Appendix A*, *Scope of Work*	Please comment on the overall organization of the Scope of Work. Does the organization of tasks seem logical? Please identify any suggested modifications/additions.
9.	1	III Form of Proposal	The current project collects traffic data using TrafficWatch, SpeedInfo and Caltrans loops to meet the functional requirements described in *Appendix A-2*. The draft RFP assumes that the current approach would continue at contract onset, but invites proposers to introduce new technologies over

#	Priority	RFP Section Reference	Questions for Proposers
			time, as long as they stay within budget. Please comment if this approach provides bidders the flexibility to pursue new strategies and if there is enough information and appropriately structured functional requirements so that bidders can effectively propose new strategies. What suggestions do you have for soliciting data collection strategies from potential bidders in order to generate the most effective proposals?
10.	1	III Form of Proposal	The RFP asks bidders to recommend strategies to reduce project costs and provide value-added services. Does the RFP provide enough information and background materials to allow a potential bidder to make such recommendations? If not, what additional information is needed? (Note: MTC plans to provide additional information in *Appendix K* in the final RFP.) What suggestions do you have for alternative ways to solicit value-added strategies from potential bidders in order to generate the most effective proposals?
11.	2	III.D & E Team Structure, Qualifications, etc.	Will the breadth of skills required to accomplish all the tasks in the preliminary Scope of Work negatively influence your decision to propose? Which requirements pose particular challenges (e.g., real-time transit, phone, etc.) Please provide suggestions that would remedy the challenges (e.g., ideas for breaking the RFP into smaller pieces.)
12.	2	*Appendix A-3 Performance Payment Deductions*	Please note any concerns you have about the Contractor Performance Payment Deductions. Would this deduction strategy prevent you from bidding on this contract? Suggest changes to the deduction strategy that would encourage your firm to bid on this contract while still providing a mechanism for MTC to ensure that performance standards are met.
13.	2	II.A Scope of Work	What are your concerns, if any, about the "renewable services" concept? Does the potential removal of some tasks from this contract negatively impact your firm's interest in bidding on this contract? What synergies do you feel would be lost if any of the renewable services were removed from this contract? Name the renewable services affected. Please provide suggestions that would remedy any of your firms concerns with this concept.
14.	2	*Appendix C, Enhancements*	MTC wants to ensure that relatively minor changes can be made to the system (i.e., what we are calling "optimizations) without getting buried under "larger" development work and day-to-day operations. As such, we have included "optimizations" as part of ongoing maintenance. Do the specific optimizations defined for Year 1 provide you with enough understanding of the level of effort of that optimization tasks will require each year? Do you have enough information to set annual budgets for "optimizations?"
15.	2	*Appendix C,*	Based on the SOW and the budget and schedule, discuss your

#	Priority	RFP Section Reference	Questions for Proposers
		Enhancements	perceived ability to accomplish the work described in *Appendix C, Enhancements.*
16.	3	*Appendix C, Enhancements*	MTC has considered defining optimizations as any development work that would require less than 50 hours. Enhancements requiring more than 50 hours would be implemented through Task Element V. Is this a reasonable way to distinguish between optimizations covered by the on-going maintenance budget versus tasks that tap the Project Element V budget?
17.	3	Letter of Invitation	Please note any specific information you would like presented at the Proposers' conference.
18.	3	I. Project Background	Is the amount of information provided about MTC's 511 program enough for you to understand the system's organization and the level of coordination needed? Does the technical documentation available on the MTC website at http://www.mtc.ca.gov/jobs/ provide enough detail to allow a well-developed response? If not, which technical document(s) would provide more detail and what information would you like to know?
19.	3	III Form of Proposal	Is the page limit adequate for to allow a meaningful response?
20.	3	III.D & E Team Structure, Qualifications, etc.	Discuss any challenges you foresee in meeting staff location requirements and/or coordinating staff to meet this project's needs.
21.	3	*Appendix A, Scope of Work*	Are there any specific products, strategies, features, or functions that need to be called out in tasks in the SOW? If so, what are they and in what context should they be incorporated into the SOW?
22.	3	*Appendix A-4, Project Deliverables and Approval Process*	Does the level of detail provided regarding deliverables give you enough information to understand what we are seeking? Please call out the specific deliverables about which you would like more detail.

In addition to responding to any, or all, of the above questions, please provide any additional comments or questions you may have.

APPENDIX M GLOSSARY

511: the Bay Area's free traveler information service, on the phone at 511 and on the Web at 511.org.

511 Manager: a web-based utility application that enables users to view and/or manage various types of pre-recorded messages that can play back at different points within the 511 phone system, such as a floodgate message at a selected menu location

AIS hosting facility: the facility where the servers that support the 511 phone service, the 511 Traffic page, and the 511.org home page are located.

All Nighter: regional coordinated bus service from approximately 1 to 5 a.m. throughout Alameda, Contra Costa, San Francisco and San Mateo counties, operated by five transit agencies - AC Transit, County Connection, Muni, SamTrans and Wheels.

ANI (Automatic Number Identification): a service that provides the receiver of a telephone call with the number of the calling phone.

ATIS Advanced Traveler Information Systems. Systems such as 511 that utilize information and communication technologies to collect, fuse and disseminate multi-modal information to a wide range of travelers.

Automatic Link Data Fusion (ALDF): a combination of computer hardware and software elements that provide the capability to read, record, and publish all roadway speed and travel time data produced from data collection component sources and historical data, and select the highest quality data among these sources for use by the 511 system.

Break-A-Link: a software function that allows the 511 Traveler Information Center operators to overwrite speed data, especially in the event of a road closure.

Caltrans Data Detection Interface (CDDI): a combination of computer hardware and software elements that provide the capability to collect data received from Caltrans detector stations and validate this data before publishing it to other 511 systems for further processing. CDDI Analyzer

Caltrans Data Detection Interface Analyzer (CDDI Analyzer): a distinct application, that is not part of the CDDI 'production' environment. It is a utility used for performing a detailed analysis of the CDDI data to determine which devices are producing bad data. The results of this analysis are used to disable data from devices that produce bad data.

Clicks: a user's selection of a text or image link on a Web site.

Corridor Mobility Improvement Account (CMIA): a statewide program for congestion improvement projects

511 Driving Times: a feature on the 511 phone service and the 511 Traffic page that calculates the time it takes to travel between two points.

Downloads: the number of files transmitted over a network.

Emergency Abbreviated System (EAS) for the Phone: two phone menu structures that are available for use during emergency situations. The regional phone EAS allows the

restriction of information disseminated during an emergency in order to provide critical information to as many callers as possible. The sub-regional phone EAS allows the organization of information for a sub-regional planned event or emergency in a separate menu from the regular main menu, thus making it easier for callers to access the emergency information.

Emergency Abbreviated System (EAS) for the website: an additional webpage that summarizes emergency information in a blog format. At a minimum, the regular homepage and traffic pages are redirected to this EAS webpage during major, regional emergencies.

Enhanced Data Fusion System (EDFS): a combination of computer hardware and software systems at the TIC that communicates with other subsystems, including several interrelated applications that provide the TIC staff with the ability to enter, view, and analyze relevant traffic data, and an Internet-enabled system to receive event input from other agencies and display existing events. The data fusion system extends to and includes the interfaces with the data collection and data dissemination servers.

Enhancement: An improvement or change to the 511 service that will take more than 50 hours of development time and that benefit from having individual scopes of work, functional requirements, etc. Enhancements will be undertaken through individual task orders.

Feature: a tool on the 511 phone service or 511.org that disseminates traveler information.

Group Enabled Mobility and Safety (GEMS): Vehicle Infrastructure Integration mobility and safety projects being developed under the SafeTrip-21 program for USDOT.

Historical Driving Times: driving times generated based on historical rather than live data through the Predict-a-Trip tool on the 511 Traffic page.

Hits: each file sent to a browser by a Web server.

Link Data Interpolator (LDI): a software program that provides the capability to read ALDF published link speed data to generate (synthesize) data for other links.

Maintenance includes:

- Regularly scheduled preventive maintenance,
- Troubleshooting and fixing system failures,
- Responding to and recovering from hardware and software outages,
- Repairing and replacing equipment,
- Updating software,
- Backing up system data,
- Archiving backup media,
- Modifying the tools that collect and process 511 traffic information, and
- Optimizing system performance by making improvements or changes that take 50 or fewer hours of development time.

MY 511: 511's personalized service that allows users to build their own home page as well as bypass the 511 phone menu to obtain current information for their trips.

Nuance Voice Platform Lite (NVP Lite): back-up phone system to ensure that transfers out to other programs and transit agencies continue to be supported if the interactive voice response system experiences difficulty.

Optimization: A modest improvement or change to the 511 service that will take 50 or fewer hours of development time. These improvements will be made through ongoing system maintenance. Optimizations can be made without needing a separate Scope of Work or functional requirements, etc.

Page Views: a request for a file whose type is defined as a page in log analysis, irrespective of how many hits are generated.

Phone Emergency Abbreviated System (EAS) – Regional Disaster: a version of the 511 phone service that enables only a subset of the existing capabilities to be available to the public during a regional disaster.

Phone Emergency Abbreviated System (EAS) – Subregional Disaster: an additional menu within the 511 phone service that provides travel conditions information during a subregional disaster.

Predict-A-Trip: a feature of the 511 Traffic page that provides typical travel time and speed information for user-selected driving times routes based on historical information.

ProjectSolve: the online project management tool where project files are archived.

Real-Time Transit Technical Advisory Committee (TAC): The group of transit agency representatives that advises the real-time transit project.

Referrals: activity generated through external Web sites to 511.org.

San Francisco Bay Area Regional Intelligent Transportation Systems ITS architecture and standards: A roadmap for transportation systems integration in the Bay Area over the next 10 years. The plan provides methods to make the most out of technological advances by developing a strategy for deployment and a framework, or architecture, for linking the region's transportation systems.

Sensys: a traffic data source that combines magnetic sensors with low-power radio technology to create a wireless vehicle detection system.

Sister pages: the four modal pages within the 511.org Web site – Traffic, Transit, Rideshare, and Bicycling.

SQL Web Reports: a Web-based tool that generates custom reports of 511 usage.

Smart Corridors: a multi-modal advanced transportation management system, which provides real-time traffic conditions on local arterials to the public.

System Reliability Database: a database where failures of the 511 service are recorded, including affected components, duration, failure type, etc.

TIC (Traveler Information Center): The 511 operations center, collocated with Caltrans and the CHP, which collects and disseminates incident and event data through 511.

Ticker: a scrolling banner on 511.org that displays breaking news, including major traffic disruptions and transit delays.

TOMS - TravInfo Open Messaging Service: The 511 traffic data feed that is made available to third-party Information Service Providers (ISPs).

Unique visitors: uniquely identified users generating requests on the web server or viewing pages within a defined time period, irrespective of how many visits they make. A visitor is identified through a cookie or an IP number.

User sessions/visits: The presence of a user, with a specific IP address. A new session begins after 10 minutes of inactivity on the web site by the same user.